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Trial record **2 of 2** for: CAIN457A2206

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Efficacy of AIN457 in Adults (18-65 Years) With Psoriatic Arthritis

This study has been completed.

Sponsor:
Novartis Pharmaceuticals

Information provided by (Responsible Party):
Novartis (Novartis Pharmaceuticals)

ClinicalTrials.gov Identifier:
NCT00809614

First received: December 16, 2008
Last updated: October 14, 2015
Last verified: October 2015
History of Changes

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Results First Received: February 1, 2015

Study Type:	Interventional
Study Design:	Allocation: Randomized; Endpoint Classification: Efficacy Study; Intervention Model: Parallel Assignment; Masking: Double Blind (Subject, Investigator); Primary Purpose: Treatment
Condition:	Psoriatic Arthritis
Interventions:	Biological: AIN457 Biological: Placebo

Participant Flow

Hide Participant Flow

Recruitment Details

Key information relevant to the recruitment process for the overall study, such as dates of the recruitment period and locations
A total of 42 patients were planned and recruited. The patients were randomized to either AIN457 2x10 mg/kg or placebo in a ratio of 2:1. The total sample size of 42 included an additional 3 subjects to allow for drop-outs and/or incomplete data.

Pre-Assignment Details

Significant events and approaches for the overall study following participant enrollment, but prior to group assignment
No text entered.

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Participant Flow: Overall Study

	AIN457 (2x 10mg/kg)	Placebo
STARTED	**28**	**14**
Pharmacokinetic Safety Set	**27**	**14**

Pharmacodynamic (PD) Set	**24**	**13**
COMPLETED	**25**	**10**
NOT COMPLETED	**3**	**4**
Lack of Efficacy	**2**	**3**
Withdrawal by Subject	**1**	**1**

Baseline Characteristics

Hide Baseline Characteristics

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
All patients who received at least one dose of study drug were included in the safety and tolerability evaluation.

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.
Total	Total of all reporting groups

Baseline Measures

	AIN457 (2x 10mg/kg)	**Placebo**	**Total**
Number of Participants [units: participants]	**28**	**14**	**42**
Age [units: Years] Mean (Standard Deviation)	**46.7 (11.3)**	**47.6 (8.1)**	**47.0 (10.2)**
Gender [units: participants]			
Female	**19**	**8**	**27**
Male	**9**	**6**	**15**

Outcome Measures

Hide All Outcome Measures

1. Primary: Percentage of ACR Responders Per Treatment at Week 6 [Time Frame: week 6]

Measure Type	Primary
Measure Title	Percentage of ACR Responders Per Treatment at Week 6
Measure Description	A participant was considered to be a responder according to the ACR20, 50 or 70 criteria if the participant had at least 20% 50% or 70% improvement in both the tender joint count and swollen joint count measures, and in at least 3 of the following 5 measures: patient's assessment of pain, patient's global assessment of disease activity, physician's global assessment of disease activity, Health Assessment Questionnaire (HAQ©) score, and/or C-reactive protein (CRP)
Time Frame	week 6
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocol deviations.

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	**Placebo**
Number of Participants Analyzed [units: participants]	**24**	**13**
Percentage of ACR Responders Per Treatment at Week 6 [units: Percentage of ACR responders]		
ACR20 responders	**39**	**23**
ACR50 responders	**17**	**8**
ACR70 responders	**9**	**0**

No statistical analysis provided for Percentage of ACR Responders Per Treatment at Week 6

2. Primary: Percentage of PsARC Responders Per Treatment at Week 6 [Time Frame: week 6]

Measure Type	Primary
Measure Title	Percentage of PsARC Responders Per Treatment at Week 6
Measure Description	Psoriatic Arthritis Response Criteria (PsARC) includes measures of tender and swollen joint counts, patient's assessment of pain, physician's and patient's global assessment of disease activity A subject is defined as a PsARC responder if, and only if, they have an improvement in two of the following four factors (with at least one factor being a joint count) and no worsening in the remaining factors: 1) Patient global assessment (0-100 VAS scale, improvement defined as decrease of at least 20 units) 2) Physician global assessment (0-100 VAS scale, improvement defined as decrease of at least 20 units) 3) Tender 78-joint count (improvement defined as decrease of at least 30%) 4) Swollen 76-joint count (improvement defined as decrease of at least 30%)
Time Frame	week 6
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocol deviations.

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	Placebo
Number of Participants Analyzed [units: participants]	**24**	**13**
Percentage of PsARC Responders Per Treatment at Week 6 [units: Percentage of PsARC responders]	**43**	**38**

No statistical analysis provided for Percentage of PsARC Responders Per Treatment at Week 6

3. Secondary: Percentage of Participants Who Achieved 20%, 50% or 70% Improvement as Measured by ACR Response Criteria [Time Frame: Day 8 and 15, Weeks 6, 8, 12, 16 and 24]

Measure Type	Secondary
Measure Title	Percentage of Participants Who Achieved 20%, 50% or 70% Improvement as Measured by ACR Response Criteria
Measure Description	A participant was considered to be a responder according to the ACR20, 50 or 70 criteria if the participant had at least 20% 50% or 70% improvement in both the tender joint count and swollen joint count measures, and in at least 3 of the following 5 measures: patient's assessment of pain, patient's global assessment of disease activity, physician's global assessment of disease activity, Health Assessment Questionnaire (HAQ©) score, and/or C-reactive protein (CRP)
Time Frame	Day 8 and 15, Weeks 6, 8, 12, 16 and 24
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocoldeviations.

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	Placebo
Number of Participants Analyzed [units: participants]	**24**	**13**
Percentage of Participants Who Achieved 20%, 50% or 70% Improvement as Measured by ACR Response Criteria [units: Percentage of particpants]		
Day 8 ACR20 responders	**17**	**8**
Day 8 ACR50 responders	**0**	**0**
Day 8 ACR70 responders	**0**	**0**
Day 15 ACR20 responders	**25**	**17**
Day 15 ACR50 responders	**13**	**0**
Day 15 ACR70 responders	**0**	**0**
Week 6 ACR20 responders	**39**	**23**
Week 6 ACR50 responders	**17**	**8**
Week 6 ACR70 responders	**9**	**0**

Week 8 ACR20 responders	**42**	**23**
Week 8 ACR50 responders	**29**	**8**
Week 8 ACR70 responders	**17**	**0**
Week 12 ACR20 responders	**39**	**15**
Week 12 ACR50 responders	**22**	**8**
Week 12 ACR70 responders	**9**	**8**
Week 16 ACR20 responders	**41**	**27**
Week 16 ACR50 responders	**27**	**18**
Week 16 ACR70 responders	**18**	**9**
Week 24 ACR20 responders	**43**	**18**
Week 24 ACR50 responders	**17**	**9**
Week 24 ACR70 responders	**13**	**9**

No statistical analysis provided for Percentage of Participants Who Achieved 20%, 50% or 70% Improvement as Measured by ACR Response Criteria

4. Secondary: Percentage of Participants Who Achieved PsARC Response [Time Frame: Day 8 and 15, Weeks 6, 8, 12, 16 and 24]

Measure Type	Secondary
Measure Title	Percentage of Participants Who Achieved PsARC Response
Measure Description	responder" defined as 20% or more improvement in at least 4 of 6 criteria: 1) swollen joint count, 2) tender joint count, 3) morning stiffness duration (low back), 4) current low back pain, 5) current peripheral joint pain, 6) patient global assessment A subject is defined as a PsARC responder if, and only if, they have an improvement in two of the following four factors (with at least one factor being a joint count) and no worsening in the remaining factors: 1) Patient global assessment (0-100 VAS scale, improvement defined as decrease of at least 20 units) 2) Physician global assessment (0-100 VAS scale, improvement defined as decrease of at least 20 units) 3) Tender 78-joint count (improvement defined as decrease of at least 30%) 4) Swollen 76-joint count (improvement defined as decrease of at least 30%)
Time Frame	Day 8 and 15, Weeks 6, 8, 12, 16 and 24
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocol deviations.

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	**Placebo**
Number of Participants Analyzed [units: participants]	**24**	**13**
Percentage of Participants Who Achieved PsARC Response [units: Percentage of participants]		

Day 8	**27**	**23**
Day 15	**33**	**15**
Week 6	**43**	**38**
Week 8	**52**	**38**
Week 12	**52**	**15**
Week 16	**55**	**36**
Week 24	**50**	**36**

No statistical analysis provided for Percentage of Participants Who Achieved PsARC Response

5. Secondary: Mastricht Ankylosing Spondylitis Enthesis Score (MASES) Over Time Per Treatment [Time Frame: Baseline and Day 8, 15 and weeks 6, 8, 12, 16 and 24]

Measure Type	Secondary
Measure Title	Mastricht Ankylosing Spondylitis Enthesis Score (MASES) Over Time Per Treatment
Measure Description	The MASES included assessments of 13 sites. Enthesitis sites included in the MASES index are: 1st costochondral, 7th costochondral, posterior superior iliac spine, anterior superior iliac spine, iliac crest (all above was assessed bilaterally), 5th lumbar spinous process, proximal Achilles (bilateral). The MASES score is defined as the total number of painful MASES entheses. The score was derived as the sum of the 13 scores divided by 3 and the total range is 0 (no tenderness) to 13 (severe tenderness).
Time Frame	Baseline and Day 8, 15 and weeks 6, 8, 12, 16 and 24
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocol deviations

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	**Placebo**
Number of Participants Analyzed [units: participants]	**24**	**13**
Mastricht Ankylosing Spondylitis Enthesis Score (MASES) Over Time Per Treatment [units: Units on a scale] Mean (Standard Deviation)		
Baseline (n=24,13)	**3.0 (4.12)**	**3.4 (2.33)**
Day 8 (n=23,13)	**2.6 (4.30)**	**2.7 (2.59)**
Day 15 (24,13)	**2.9 (4.81)**	**2.8 (3.42)**
Week 6 (n=23,11)	**2.6 (4.68)**	**2.8 (3.34)**
Week 8 (n=22,11)	**2.7 (4.14)**	**2.6 (3.32)**
Week 12 (n=20,11)	**2.4 (4.06)**	**2.5 (2.62)**

Week 16 (n=19,9)	**2.6 (4.78)**	**2.0 (2.40)**
Week 24 (n=23,11)	**1.6 (3.88)**	**2.7 (3.32)**

No statistical analysis provided for Mastricht Ankylosing Spondylitis Enthesis Score (MASES) Over Time Per Treatment

6. Secondary: Psoriatic Area and Severity Index (PASI) Score in Patients Over Time Per Treatment [Time Frame: Baseline, Day 8, 15 and weeks 6, 8, 12, 16, 20 and 24]

Measure Type	Secondary
Measure Title	Psoriatic Area and Severity Index (PASI) Score in Patients Over Time Per Treatment
Measure Description	The PASI assessed the extent of psoriasis on four body surface areas (head, trunk and upper and lower limbs) and the degree of plaque erythema, scaling and thickness. The PASI score accounted for the extent of body surface area affected by the erythema, scaling and thickness, and the severity of these measures. The score ranged from 0 (no disease) to 72 (maximal disease).
Time Frame	Baseline, Day 8, 15 and weeks 6, 8, 12, 16, 20 and 24
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocol deviations

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	**Placebo**
Number of Participants Analyzed [units: participants]	**24**	**13**
Psoriatic Area and Severity Index (PASI) Score in Patients Over Time Per Treatment [units: Unit on a Scale] Mean (Standard Deviation)		
Baseline (n=24,13)	**3.5 (4.20)**	**2.4 (2.13)**
Week 6 (n=23,11)	**1.0 (1.5)**	**3.10 (4.94)**
Week 12 (n=20,11)	**0.71 (1.12)**	**3.3 (5.90)**
Week 24 (n=23,11)	**1.2 (1.67)**	**3.6 (5.39)**
Day 8 (n=23,13)	**2.2 (2.77)**	**2.3 (2.34)**
Day 15 (n=24,13)	**2.2 (2.92)**	**2.2 (2.79)**
Week 8 (n=22,11)	**0.91 (1.43)**	**3.5 (6.57)**
Week 16 (n=19,9)	**0.91 (1.25)**	**4.2 (8.13)**
Week 20 (n=19,8)	**0.85 (1.36)**	**3.84 (6.66)**

No statistical analysis provided for Psoriatic Area and Severity Index (PASI) Score in Patients Over Time Per Treatment

7. Secondary: SpA Research Consortium of Canada (SPARCC) Score Score in Patients Over Time Per Treatment [Time Frame: Baseline, Day 8, 15 and weeks 6, 8, 12, 16 and 24]

Measure Type	Secondary
Measure Title	SpA Research Consortium of Canada (SPARCC) Score Score in Patients Over Time Per Treatment
Measure Description	SPARCC evaluated 18 enthesis sites: medial and lateral epicondyle humerus, supraspinatus insertion, proximal Achilles, greater trochanter, medial and lateral condyl femur, insertion of plantar fascia, quadriceps insertion of patella, inferior pole of patella, and tibial tubercle. SPARCC enthesis index is defined as the total number of painful entheses assessed at the SPARCC sites. Total SI joint scores could range from 0 to 78, with a higher score indicating more signs of disease.
Time Frame	Baseline, Day 8, 15 and weeks 6, 8, 12, 16 and 24
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocol deviations

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	Placebo
Number of Participants Analyzed [units: participants]	**24**	**13**
SpA Research Consortium of Canada (SPARCC) Score Score in Patients Over Time Per Treatment [units: Unit on a scale] Mean (Standard Deviation)		
Baseline (n=24,13)	**4.42 (5.055)**	**6.08 (4.406)**
Week 6 (n=23,11)	**3.65 (5.515)**	**4.27 (4.880)**
Week 12 (n=20,11)	**4.10 (5.428)**	**5.27 (4.452)**
Week 24 (n=23,11)	**3.22 (5.161)**	**4.36 (4.884)**
Day 8 (23,13)	**3.78 (5.054)**	**4.08 (3.840)**
Day 15 (n=24,13)	**4.50 (6.400)**	**4.15 (4.356)**
Week 8 (n=22,11)	**4.45 (4.993)**	**4.00 (4.266)**
Week 16 (n=19,9)	**3.86 (5.844)**	**3.67 (3.354)**

No statistical analysis provided for SpA Research Consortium of Canada (SPARCC) Score Score in Patients Over Time Per Treatment

8. Secondary: Leeds Dactylitis Instrument (LDI) Score in Patients Over Time Per Treatment [Time Frame: Baseline, Day 8, 15 and weeks 6, 8, 12, 16 and 24]

Measure Type	Secondary
Measure Title	Leeds Dactylitis Instrument (LDI) Score in Patients Over Time Per Treatment
Measure Description	The LDI basic measured the ratio of the circumference of the affected digit to the circumference of the digit on the

	opposite hand or foot, using a minimum difference of 10% to define a dactylitic digit. The ratio of circumference was multiplied by a tenderness score, using a modification of LDI which was a binary score (1 for tender, 0 for non-tender). If both sides were considered involved, the number was compared to data provided in a table. This modification was referred to as LDI basic and was applied in this study. The LDI required a tool to measure digital circumference and this tool was provided to the centers.
Time Frame	Baseline, Day 8, 15 and weeks 6, 8, 12, 16 and 24
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
Only participants from the pharmacodynamic (PD) analysis set, who had available scores at each given time point, were analyzed for that time point. The PD analysis set included all patients with evaluable PD data with no protocol deviations that impacted PD data analysis.

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	Placebo
Number of Participants Analyzed [units: participants]	**6**	**7**
Leeds Dactylitis Instrument (LDI) Score in Patients Over Time Per Treatment [units: total score] Mean (Standard Deviation)		
Baseline (n=6,5)	**2.74 (2.32)**	**1.56 (2.35)**
Week 6 (n=4,5)	**2.92 (2.37)**	**2.14 (2.56)**
Week 12 (n=3,6)	**2.52 (1.57)**	**0.73 (0.58)**
Week 24 (n=2,6)	**3.08 (1.54)**	**1.88 (2.19)**
Day 8 (n=5,5)	**2.65 (1.60)**	**1.32 (0.94)**
Day 15 (n=4,5)	**2.67 (2.61)**	**1.72 (2.25)**
Week 8 (n=3,5)	**2.96 (1.03)**	**1.54 (2.35)**
Week 16 (n=3,4)	**2.65 (1.82)**	**2.08 (2.40)**

No statistical analysis provided for Leeds Dactylitis Instrument (LDI) Score in Patients Over Time Per Treatment

9. Secondary: Disease Activity Score 28 (DA28) in Patients Over Time Per Treatment [Time Frame: Baseline, day 8, 15 and weeks 6, 8, 12, 16 and 24]

Measure Type	Secondary
Measure Title	Disease Activity Score 28 (DA28) in Patients Over Time Per Treatment
Measure Description	The Disease Activity Score (DAS) is a combined index to measure disease activity in arthritic patients. DAS28 is determined using the following variables: 28-joint counts (tender28 and swollen28), CRP, and the participant's general health (GH) Based on the patients global disease activity measured on a Visual Analogue Scale (VAS) of 100 mm (0 - 100). Using the data from these variables, DAS28 is calculated using the following formula: DAS28 = 0.56*sqrt(TJC28) + 0.28*sqrt(SJC28) + 0.36*ln(CRP+1) + 0.014*GH + 0.96. The calculation results in a DAS28 score from 0 to 10 indicating the current activity of the rheumatoid arthritis of the patient. A DAS28 above 5.1 means high disease activity whereas a DAS28 below 3.2 indicates low disease activity. Remission is achieved by a DAS28 lower than 2.6.

Time Frame	Baseline, day 8, 15 and weeks 6, 8, 12, 16 and 24
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
For pharmacodynamic (PD) analysis set five patients were excluded due to protocol deviations

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)	**Placebo**
Number of Participants Analyzed [units: participants]	**24**	**13**
Disease Activity Score 28 (DA28) in Patients Over Time Per Treatment [units: Units on a scale] Mean (Standard Deviation)		
Baseline (n=24,13)	**4.84 (1.21)**	**4.76 (1.19)**
Week 6 (n=28,12)	**3.94 (1.47)**	**4.20 (1.20)**
Week 12 (n=23,11)	**3.62 (1.42)**	**4.36 (1.41)**
Week 24 (n=23,11)	**3.84 (1.30)**	**4.28 (1.40)**
Day 8 (22,12)	**4.19 (1.27)**	**4.43 (1.27)**
Day 15 (24,13)	**4.09 (1.26)**	**4.35 (1.05)**
Week 8 (n=22,10)	**3.66 (1.65)**	**4.64 (1.22)**
Week 16 (n=18,9)	**3.54 (1.48)**	**3.83 (1.58)**

No statistical analysis provided for Disease Activity Score 28 (DA28) in Patients Over Time Per Treatment

10. Secondary: Pharmacokinetic (PK) of AIN457: Time to Reach the Maximum Concentration After Drug Administration (Tmax) [Time Frame: Day 1 till end of the study (169)]

Measure Type	Secondary
Measure Title	Pharmacokinetic (PK) of AIN457: Time to Reach the Maximum Concentration After Drug Administration (Tmax)
Measure Description	On dosing days (Day 1 and Day 22) samples were taken at pre-dose (0 h), 2, 3, 4, 24. After the first infusion samples were taken at Day 8 and Day 15. After the second infusion samples were taken at Day 29, Day 43, Day 57, Day 71, Day 85, Day 113, Day 141, Day 169.
Time Frame	Day 1 till end of the study (169)
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
Only patients who recieved active drug with evaluable pharmacokinetic (PK) parameter data and no protocol deviation that impacted PK were included in the PK data analysis set

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)
Number of Participants Analyzed [units: participants]	**27**
Pharmacokinetic (PK) of AIN457: Time to Reach the Maximum Concentration After Drug Administration (Tmax) [units: Day] Median (Full Range)	**21.0 (0.0833 to 23.1)**

No statistical analysis provided for Pharmacokinetic (PK) of AIN457: Time to Reach the Maximum Concentration After Drug Administration (Tmax)

11. Secondary: Pharmacokinetic (PK) of AIN457: Clearance of AIN457 After Single Dose Administration [Time Frame: Day 1 till end of the study (169)]

Measure Type	Secondary
Measure Title	Pharmacokinetic (PK) of AIN457: Clearance of AIN457 After Single Dose Administration
Measure Description	On dosing days (Day 1 and Day 22) samples were taken at pre-dose (0 h), 2, 3, 4, 24. After the first infusion samples were taken at Day 8 and Day 15. After the second infusion samples were taken at Day 29, Day 43, Day 57, Day 71, Day 85, Day 113, Day 141, Day 169.
Time Frame	Day 1 till end of the study (169)
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
Only patients who recieved active drug with evaluable pharmacokinetic (PK) parameter data and no protocol deviation that impacted PK were included in the PK data analysis set

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)
Number of Participants Analyzed [units: participants]	**24**
Pharmacokinetic (PK) of AIN457: Clearance of AIN457 After Single Dose Administration [units: Liters/day] Mean (Standard Deviation)	**0.161 (0.0535)**

No statistical analysis provided for Pharmacokinetic (PK) of AIN457: Clearance of AIN457 After Single Dose Administration

12. Secondary: Pharmacokinetic (PK) of AIN457: Terminal Elimination Half-life (T1/2) [Time Frame: Day 1 till end of the study (169)]

Measure Type	Secondary
Measure Title	Pharmacokinetic (PK) of AIN457: Terminal Elimination Half-life (T1/2)
Measure Description	On dosing days (Day 1 and Day 22) samples were taken at pre-dose (0 h), 2, 3, 4, 24. After the first infusion samples were taken at Day 8 and Day 15. After the second infusion samples were taken at Day 29, Day 43, Day 57, Day 71, Day 85, Day 113, Day 141, Day 169.
Time Frame	Day 1 till end of the study (169)
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
Only patients who recieved active drug with evaluable pharmacokinetic (PK) parameter data and no protocol deviation that impacted PK were included in the PK data analysis set

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)
Number of Participants Analyzed [units: participants]	**24**
Pharmacokinetic (PK) of AIN457: Terminal Elimination Half-life (T1/2) [units: day] Mean (Standard Deviation)	**29.8 (4.74)**

No statistical analysis provided for Pharmacokinetic (PK) of AIN457: Terminal Elimination Half-life (T1/2)

13. Secondary: Pharmacokinetic (PK) of AIN457: Observed Maximum Serum Concentration Following Drug Administration (Cmax) [Time Frame: Day 1 till end of the study (169)]

Measure Type	Secondary
Measure Title	Pharmacokinetic (PK) of AIN457: Observed Maximum Serum Concentration Following Drug Administration (Cmax)
Measure Description	On dosing days (Day 1 and Day 22) samples were taken at pre-dose (0 h), 2, 3, 4, 24. After the first infusion samples were taken at Day 8 and Day 15. After the second infusion samples were taken at Day 29, Day 43, Day 57, Day 71, Day 85, Day 113, Day 141, Day 169.
Time Frame	Day 1 till end of the study (169)
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
Only patients who recieved active drug with evaluable pharmacokinetic (PK) parameter data and no protocol deviation that impacted PK were included in the PK data analysis set

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)
Number of Participants Analyzed [units: participants]	**27**
Pharmacokinetic (PK) of AIN457: Observed Maximum Serum Concentration Following Drug Administration (Cmax) [units: ug/mL] Mean (Standard Deviation)	**424 (113)**

No statistical analysis provided for Pharmacokinetic (PK) of AIN457: Observed Maximum Serum Concentration Following Drug Administration (Cmax)

14. Secondary: PK of AIN457: Area Under the Serum Concentration-time Curve From Time Zero to the Time of Last Quantifiable Concentration (AUClast), Area Under the Serum Concentration-time Curve From Time Zero to (AUCinf) [Time Frame: Day 1 till end of the study (169)]

Measure Type	Secondary
Measure Title	PK of AIN457: Area Under the Serum Concentration-time Curve From Time Zero to the Time of Last Quantifiable Concentration (AUClast), Area Under the Serum Concentration-time Curve From Time Zero to (AUCinf)
Measure Description	On dosing days (Day 1 and Day 22) samples were taken at pre-dose (0 h), 2, 3, 4, 24. After the first infusion samples were taken at Day 8 and Day 15. After the second infusion samples were taken at Day 29, Day 43, Day 57, Day 71, Day 85, Day 113, Day 141, Day 169.
Time Frame	Day 1 till end of the study (169)
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
Only patients who recieved active drug with evaluable pharmacokinetic (PK) parameter data and no protocol deviation that impacted PK were included in the PK data analysis set

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)
Number of Participants Analyzed [units: participants]	**24**
PK of AIN457: Area Under the Serum Concentration-time Curve From Time Zero to the Time of Last Quantifiable Concentration (AUClast), Area Under the Serum Concentration-time Curve From Time Zero to (AUCinf) [units: day*ug/mL] Mean (Standard Deviation)	
AUClast	**12300 (2240)**
AUCinf	**12600 (2320)**

No statistical analysis provided for PK of AIN457: Area Under the Serum Concentration-time Curve From Time Zero to the Time of Last Quantifiable Concentration (AUClast), Area Under the Serum Concentration-time Curve From Time Zero to (AUCinf)

15. Secondary: Pharmacokinetic (PK) of AIN457: Volume of Distribution During the Terminal Phase Following Intravenous Elimination (Vz) [Time Frame: Day 1 till end of the study (169)]

Measure Type	Secondary
Measure Title	Pharmacokinetic (PK) of AIN457: Volume of Distribution During the Terminal Phase Following Intravenous Elimination (Vz)
Measure Description	On dosing days (Day 1 and Day 22) samples were taken at pre-dose (0 h), 2, 3, 4, 24. After the first infusion samples were taken at Day 8 and Day 15. After the second infusion samples were taken at Day 29, Day 43, Day 57, Day 71, Day 85, Day 113, Day 141, Day 169.
Time Frame	Day 1 till end of the study (169)
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
Only patients who recieved active drug with evaluable pharmacokinetic (PK) parameter data and no protocol deviation that impacted PK were included in the PK data analysis set

Reporting Groups

	Description
AIN457 (2x 10mg/kg)	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.

Measured Values

	AIN457 (2x 10mg/kg)
Number of Participants Analyzed [units: participants]	**24**
Pharmacokinetic (PK) of AIN457: Volume of Distribution During the Terminal Phase Following Intravenous Elimination (Vz) [units: Liters] Mean (Standard Deviation)	**6.81 (2.17)**

No statistical analysis provided for Pharmacokinetic (PK) of AIN457: Volume of Distribution During the Terminal Phase Following Intravenous Elimination (Vz)

Serious Adverse Events

Hide Serious Adverse Events

Time Frame	No text entered.
Additional Description	The Safety Set includes all subjects who received at least one dose of study medication

Reporting Groups

	Description
AIN457 2x10mg/kg	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Serious Adverse Events

	AIN457 2x10mg/kg	**Placebo**

Total, serious adverse events		
# participants affected / at risk	**4/28 (14.29%)**	**1/14 (7.14%)**
Infections and infestations		
Cellulitis † 1		
# participants affected / at risk	**1/28 (3.57%)**	**0/14 (0.00%)**
Injury, poisoning and procedural complications		
Fall † 1		
# participants affected / at risk	**1/28 (3.57%)**	**0/14 (0.00%)**
Tendon rupture † 1		
# participants affected / at risk	**1/28 (3.57%)**	**0/14 (0.00%)**
Metabolism and nutrition disorders		
Obesity † 1		
# participants affected / at risk	**1/28 (3.57%)**	**0/14 (0.00%)**
Musculoskeletal and connective tissue disorders		
Polyarthritis † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Neoplasms benign, malignant and unspecified (incl cysts and polyps)		
Breast cancer in situ † 1		
# participants affected / at risk	**1/28 (3.57%)**	**0/14 (0.00%)**
Nervous system disorders		
Carpal tunnel syndrome † 1		
# participants affected / at risk	**1/28 (3.57%)**	**0/14 (0.00%)**

† Events were collected by systematic assessment
1 Term from vocabulary, MedDRA

Other Adverse Events

Hide Other Adverse Events

Time Frame	No text entered.
Additional Description	The Safety Set includes all subjects who received at least one dose of study medication

Frequency Threshold

Threshold above which other adverse events are reported	5%

Reporting Groups

	Description
AIN457 2x10mg/kg	Each patient received 10 mg/kg AIN457 intravenously, on Day 1 and Day 22.
Placebo	Each patient received 10 mg/kg of matching placebo intravenously, on Day 1 and Day 22.

Other Adverse Events

	AIN457 2x10mg/kg	**Placebo**
Total, other (not including serious) adverse events		
# participants affected / at risk	**23/28 (82.14%)**	**11/14 (78.57%)**
Blood and lymphatic system disorders		

Lymphadenopathy † 1		
# participants affected / at risk	**2/28 (7.14%)**	**0/14 (0.00%)**
Cardiac disorders		
Sinus bradycardia † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Ear and labyrinth disorders		
Hypoacusis † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Tinnitus † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Vertigo † 1		
# participants affected / at risk	**1/28 (3.57%)**	**3/14 (21.43%)**
Eye disorders		
Conjunctivitis † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Gastrointestinal disorders		
Abdominal pain upper † 1		
# participants affected / at risk	**3/28 (10.71%)**	**0/14 (0.00%)**
Diarrhoea † 1		
# participants affected / at risk	**3/28 (10.71%)**	**1/14 (7.14%)**
Nausea † 1		
# participants affected / at risk	**4/28 (14.29%)**	**1/14 (7.14%)**
Periodontitis † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
General disorders		
Chills † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Fatigue † 1		
# participants affected / at risk	**3/28 (10.71%)**	**0/14 (0.00%)**
Pyrexia † 1		
# participants affected / at risk	**1/28 (3.57%)**	**1/14 (7.14%)**
Infections and infestations		
Bronchitis † 1		
# participants affected / at risk	**1/28 (3.57%)**	**1/14 (7.14%)**
Nasopharyngitis † 1		
# participants affected / at risk	**7/28 (25.00%)**	**5/14 (35.71%)**
Oral herpes † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Respiratory tract infection † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Urinary tract infection † 1		
# participants affected / at risk	**0/28 (0.00%)**	**1/14 (7.14%)**
Injury, poisoning and procedural complications		

Contusion † 1		
# participants affected / at risk	2/28 (7.14%)	1/14 (7.14%)
Fall † 1		
# participants affected / at risk	2/28 (7.14%)	1/14 (7.14%)
Investigations		
Neutrophil count decreased † 1		
# participants affected / at risk	2/28 (7.14%)	0/14 (0.00%)
Red blood cell sedimentation rate increased † 1		
# participants affected / at risk	2/28 (7.14%)	1/14 (7.14%)
White blood cell count decreased † 1		
# participants affected / at risk	2/28 (7.14%)	0/14 (0.00%)
Metabolism and nutrition disorders		
Hyperglycaemia † 1		
# participants affected / at risk	0/28 (0.00%)	1/14 (7.14%)
Musculoskeletal and connective tissue disorders		
Arthralgia † 1		
# participants affected / at risk	1/28 (3.57%)	1/14 (7.14%)
Arthritis † 1		
# participants affected / at risk	1/28 (3.57%)	1/14 (7.14%)
Back pain † 1		
# participants affected / at risk	1/28 (3.57%)	1/14 (7.14%)
Muscle spasms † 1		
# participants affected / at risk	0/28 (0.00%)	1/14 (7.14%)
Muscle tightness † 1		
# participants affected / at risk	0/28 (0.00%)	1/14 (7.14%)
Musculoskeletal chest pain † 1		
# participants affected / at risk	0/28 (0.00%)	1/14 (7.14%)
Myalgia † 1		
# participants affected / at risk	3/28 (10.71%)	0/14 (0.00%)
Nervous system disorders		
Dizziness † 1		
# participants affected / at risk	4/28 (14.29%)	0/14 (0.00%)
Headache † 1		
# participants affected / at risk	6/28 (21.43%)	1/14 (7.14%)
Renal and urinary disorders		
Haematuria † 1		
# participants affected / at risk	1/28 (3.57%)	1/14 (7.14%)
Respiratory, thoracic and mediastinal disorders		
Cough † 1		
# participants affected / at risk	3/28 (10.71%)	0/14 (0.00%)
Oropharyngeal pain † 1		
# participants affected / at risk	2/28 (7.14%)	0/14 (0.00%)
Skin and subcutaneous tissue disorders		

Pruritus † 1		
# participants affected / at risk	**3/28 (10.71%)**	**1/14 (7.14%)**
Vascular disorders		
Haematoma † 1		
# participants affected / at risk	**1/28 (3.57%)**	**1/14 (7.14%)**
Hypertension † 1		
# participants affected / at risk	**2/28 (7.14%)**	**0/14 (0.00%)**

† Events were collected by systematic assessment
1 Term from vocabulary, MedDRA

Limitations and Caveats

Hide Limitations and Caveats

Limitations of the study, such as early termination leading to small numbers of participants analyzed and technical problems with measurement leading to unreliable or uninterpretable data
No text entered.

More Information

Hide More Information

Certain Agreements:

Principal Investigators are **NOT** employed by the organization sponsoring the study.

There **IS** an agreement between Principal Investigators and the Sponsor (or its agents) that restricts the PI's rights to discuss or publish trial results after the trial is completed.

The agreement is:

☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is **less than or equal to 60 days**. The sponsor cannot require changes to the communication and cannot extend the embargo.

☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is **more than 60 days but less than or equal to 180 days**. The sponsor cannot require changes to the communication and cannot extend the embargo.

Other disclosure agreement that restricts the right of the PI to discuss or publish trial results after the trial is completed.

☑ **Restriction Description:** The terms and conditions of Novartis' agreements with its investigators may vary. However, Novartis does not prohibit any investigator from publishing. Any publications from a single-site are postponed until the publication of the pooled data (i.e., data from all sites) in the clinical trial or disclosure of trial results in their entirety

Results Point of Contact:

Name/Title: Study Director
Organization: Novartis
phone: 862-778-8300

No publications provided

Responsible Party: Novartis (Novartis Pharmaceuticals)
ClinicalTrials.gov Identifier: NCT00809614 History of Changes
Other Study ID Numbers: **CAIN457A2206**
Study First Received: December 16, 2008
Results First Received: February 1, 2015
Last Updated: October 14, 2015

Health Authority:	United States: Food and Drug Administration United Kingdom: Medicines and Healthcare Products Regulatory Agency Germany: Federal Institute for Drugs and Medical Devices Netherlands: The Central Committee on Research Involving Human Subjects (CCMO)