



Clinical trial results:

A Randomized, Double-Blind, Vehicle-Controlled Study to Evaluate the Mechanism of Action of Ruxolitinib Cream for Vitiligo (TRuE-V MOA)

Summary

| | |
|--------------------------|----------------|
| EudraCT number | 2021-000361-32 |
| Trial protocol | FR |
| Global end of trial date | 10 July 2023 |

Results information

| | |
|--------------------------------|--------------|
| Result version number | v1 (current) |
| This version publication date | 17 May 2024 |
| First version publication date | 17 May 2024 |

Trial information

Trial identification

| | |
|-----------------------|----------------|
| Sponsor protocol code | INCB 18424-214 |
|-----------------------|----------------|

Additional study identifiers

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

Notes:

Sponsors

| | |
|------------------------------|--|
| Sponsor organisation name | Incyte Corporation |
| Sponsor organisation address | 1801 Augustine Cutoff Drive, Wilmington, United States, 19803 |
| Public contact | Study Director, Incyte Corporation, 1 8554633463, medinfo@incyte.com |
| Scientific contact | Study Director, Incyte Corporation, 1 8554633463, medinfo@incyte.com |

Notes:

Paediatric regulatory details

| | |
|--|----|
| Is trial part of an agreed paediatric investigation plan (PIP) | No |
| Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial? | No |
| Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial? | No |

Notes:

Results analysis stage

| | |
|--|--------------|
| Analysis stage | Final |
| Date of interim/final analysis | 10 July 2023 |
| Is this the analysis of the primary completion data? | No |

| | |
|----------------------------------|--------------|
| Global end of trial reached? | Yes |
| Global end of trial date | 10 July 2023 |
| Was the trial ended prematurely? | No |

Notes:

General information about the trial

Main objective of the trial:

The purpose of this study was to evaluate the mechanism of action (MOA) of ruxolitinib cream in vitiligo by assessing change in biomarkers.

Protection of trial subjects:

This study was to be performed in accordance with the ethical principles that have their origin in the Declaration of Helsinki and conducted in adherence to the study Protocol, applicable Good Clinical Practices, and applicable laws and country-specific regulations in which the study was being conducted

Background therapy: -

Evidence for comparator: -

| | |
|---|--------------|
| Actual start date of recruitment | 23 June 2021 |
| Long term follow-up planned | No |
| Independent data monitoring committee (IDMC) involvement? | No |

Notes:

Population of trial subjects

Subjects enrolled per country

| | |
|--------------------------------------|-------------------|
| Country: Number of subjects enrolled | Canada: 28 |
| Country: Number of subjects enrolled | France: 5 |
| Country: Number of subjects enrolled | United States: 27 |
| Worldwide total number of subjects | 60 |
| EEA total number of subjects | 5 |

Notes:

Subjects enrolled per age group

| | |
|---|----|
| In utero | 0 |
| Preterm newborn - gestational age < 37 wk | 0 |
| Newborns (0-27 days) | 0 |
| Infants and toddlers (28 days-23 months) | 0 |
| Children (2-11 years) | 0 |
| Adolescents (12-17 years) | 0 |
| Adults (18-64 years) | 55 |
| From 65 to 84 years | 5 |

| | |
|-------------------|---|
| 85 years and over | 0 |
|-------------------|---|

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

This study was conducted at a total of 11 sites in Canada, France, and the United States.

Period 1

| | |
|------------------------------|--|
| Period 1 title | 24-Week Double-Blind Period |
| Is this the baseline period? | Yes |
| Allocation method | Randomised - controlled |
| Blinding used | Double blind |
| Roles blinded | Subject, Investigator, Monitor, Data analyst, Assessor |

Arms

| | |
|------------------------------|-----|
| Are arms mutually exclusive? | Yes |
|------------------------------|-----|

| | |
|------------------|---|
| Arm title | Double-Blind Period: Ruxolitinib cream 1.5% BID |
|------------------|---|

Arm description:

Participants applied ruxolitinib 1.5% cream twice daily (BID) for 24 weeks.

| | |
|--|--------------|
| Arm type | Experimental |
| Investigational medicinal product name | ruxolitinib |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Cream |
| Routes of administration | Topical use |

Dosage and administration details:

1.5% cream twice daily

| | |
|------------------|--|
| Arm title | Double-Blind Period: Vehicle cream BID |
|------------------|--|

Arm description:

Participants applied matching vehicle cream BID for 24 weeks.

| | |
|--|--------------|
| Arm type | Experimental |
| Investigational medicinal product name | Vehicle |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Cream |
| Routes of administration | Topical use |

Dosage and administration details:

twice daily

| Number of subjects in period 1 | Double-Blind Period: Ruxolitinib cream 1.5% BID | Double-Blind Period: Vehicle cream BID |
|---------------------------------------|---|---|
| Started | 41 | 19 |
| Completed | 37 | 14 |
| Not completed | 4 | 5 |
| Consent withdrawn by subject | 2 | 2 |

| | | |
|-------------------|---|---|
| Lost to follow-up | 2 | 3 |
|-------------------|---|---|

Period 2

| | |
|------------------------------|------------------------------------|
| Period 2 title | 28-Week Treatment-Extension Period |
| Is this the baseline period? | No |
| Allocation method | Randomised - controlled |
| Blinding used | Not blinded |

Arms

| | |
|------------------------------|---|
| Are arms mutually exclusive? | Yes |
| Arm title | Treatment-Extension (TE) Period: Ruxolitinib cream 1.5% BID |

Arm description:

Participants who completed the Week 24 assessments with no safety concerns could continue into the 28-week Treatment-Extension Period. Participants who applied ruxolitinib cream 1.5% BID during the Double-Blind Period continued to apply ruxolitinib cream 1.5% BID for an additional 28 weeks in the Treatment-Extension Period.

| | |
|--|--------------|
| Arm type | Experimental |
| Investigational medicinal product name | ruxolitinib |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Cream |
| Routes of administration | Topical use |

Dosage and administration details:

1.5% cream twice daily

| | |
|------------------|--|
| Arm title | TE Period: Vehicle cream to Ruxolitinib cream 1.5% BID |
|------------------|--|

Arm description:

Participants who completed the Week 24 assessments with no safety concerns could continue into the 28-week Treatment-Extension Period. Participants who applied vehicle cream BID during the Double-Blind Period applied ruxolitinib cream 1.5% BID for 28 weeks in the Treatment-Extension Period.

| | |
|--|--------------|
| Arm type | Experimental |
| Investigational medicinal product name | ruxolitinib |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Cream |
| Routes of administration | Topical use |

Dosage and administration details:

1.5% cream twice daily

| | |
|--|-------------|
| Investigational medicinal product name | Vehicle |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Cream |
| Routes of administration | Topical use |

Dosage and administration details:

twice daily

| Number of subjects in period 2 | Treatment-Extension (TE) Period: Ruxolitinib cream 1.5% BID | TE Period: Vehicle cream to Ruxolitinib cream 1.5% BID |
|--------------------------------------|---|--|
| | | |
| Started | 37 | 14 |
| Completed | 27 | 9 |
| Not completed | 10 | 5 |
| Consent withdrawn by subject | 1 | 1 |
| Pregnancy | 1 | - |
| Participant Refused Safety Follow-up | 3 | 2 |
| Lost to follow-up | 5 | 2 |

Baseline characteristics

Reporting groups

| | |
|---|---|
| Reporting group title | Double-Blind Period: Ruxolitinib cream 1.5% BID |
| Reporting group description: Participants applied ruxolitinib 1.5% cream twice daily (BID) for 24 weeks. | |
| Reporting group title | Double-Blind Period: Vehicle cream BID |
| Reporting group description: Participants applied matching vehicle cream BID for 24 weeks. | |

| Reporting group values | Double-Blind Period: Ruxolitinib cream 1.5% BID | Double-Blind Period: Vehicle cream BID | Total |
|---|---|---|-------|
| Number of subjects | 41 | 19 | 60 |
| Age categorical Units: Subjects | | | |
| Adults (18-64 years) | 37 | 18 | 55 |
| From 65-84 years | 4 | 1 | 5 |
| 85 years and over | 0 | 0 | 0 |
| Age Continuous Units: years | | | |
| arithmetic mean | 45.1 | 43.7 | |
| standard deviation | ± 12.73 | ± 13.16 | - |
| Sex: Female, Male Units: participants | | | |
| Female | 18 | 8 | 26 |
| Male | 23 | 11 | 34 |
| Race/Ethnicity, Customized Units: Subjects | | | |
| White/Caucasian | 25 | 13 | 38 |
| Black/African-American | 4 | 2 | 6 |
| Asian | 5 | 3 | 8 |
| Native Hawaiian/Pacific Islander | 1 | 0 | 1 |
| Not Reported | 5 | 0 | 5 |
| South Asian | 1 | 0 | 1 |
| Middle Eastern | 0 | 1 | 1 |
| Ethnicity (NIH/OMB) Units: Subjects | | | |
| Hispanic or Latino | 8 | 4 | 12 |
| Not Hispanic or Latino | 30 | 14 | 44 |
| Unknown or Not Reported | 3 | 1 | 4 |
| Chemokine (C-X-C Motif) Ligand 10 (CXCL10), an immune biomarker | | | |
| Baseline was defined as the last non-missing measurement obtained on or before the first application of study drug. | | | |
| Units: nanograms per Liter (ng/L) | | | |
| arithmetic mean | 600.066 | 415.471 | |
| standard deviation | ± 959.3097 | ± 177.4902 | - |

End points

End points reporting groups

| | |
|---|---|
| Reporting group title | Double-Blind Period: Ruxolitinib cream 1.5% BID |
| Reporting group description: | |
| Participants applied ruxolitinib 1.5% cream twice daily (BID) for 24 weeks. | |
| Reporting group title | Double-Blind Period: Vehicle cream BID |
| Reporting group description: | |
| Participants applied matching vehicle cream BID for 24 weeks. | |
| Reporting group title | Treatment-Extension (TE) Period: Ruxolitinib cream 1.5% BID |
| Reporting group description: | |
| Participants who completed the Week 24 assessments with no safety concerns could continue into the 28-week Treatment-Extension Period. Participants who applied ruxolitinib cream 1.5% BID during the Double-Blind Period continued to apply ruxolitinib cream 1.5% BID for an additional 28 weeks in the Treatment-Extension Period. | |
| Reporting group title | TE Period: Vehicle cream to Ruxolitinib cream 1.5% BID |
| Reporting group description: | |
| Participants who completed the Week 24 assessments with no safety concerns could continue into the 28-week Treatment-Extension Period. Participants who applied vehicle cream BID during the Double-Blind Period applied ruxolitinib cream 1.5% BID for 28 weeks in the Treatment-Extension Period. | |

Primary: Percentage change from Baseline in Chemokine (C-X-C Motif) Ligand 10 (CXCL10), an immune biomarker, at Week 4, Week 12, and Week 24

| | |
|--|--|
| End point title | Percentage change from Baseline in Chemokine (C-X-C Motif) Ligand 10 (CXCL10), an immune biomarker, at Week 4, Week 12, and Week 24 ^[1] |
| End point description: | |
| Baseline was defined as the last non-missing measurement obtained on or before the first application of study drug. Percentage change from Baseline was calculated as the ([post-Baseline value minus the Baseline value] / Baseline value)*100. | |
| End point type | Primary |
| End point timeframe: | |
| Baseline; Week 4, Week 12, and Week 24 | |

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: Statistical analysis was not conducted for this endpoint.

| End point values | Double-Blind Period: Ruxolitinib cream 1.5% BID | Double-Blind Period: Vehicle cream BID | | |
|--------------------------------------|---|--|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 39 ^[2] | 16 ^[3] | | |
| Units: percent change | | | | |
| arithmetic mean (standard deviation) | | | | |
| Week 4, n=39, 16 | -20.93 (± 36.216) | 8.13 (± 52.491) | | |
| Week 12, n=37, 14 | -18.33 (± 40.035) | 21.13 (± 70.690) | | |
| Week 24, n=35, 14 | -12.92 (± 46.146) | 22.17 (± 68.893) | | |

Notes:

[2] - Only participants with available data were analyzed.

[3] - Only participants with available data were analyzed.

Statistical analyses

No statistical analyses for this end point

Secondary: Correlation of key skin inflammatory biomarkers of vitiligo in target lesions to efficacy readouts at Week 12 and Week 24

| | |
|-----------------|---|
| End point title | Correlation of key skin inflammatory biomarkers of vitiligo in target lesions to efficacy readouts at Week 12 and Week 24 |
|-----------------|---|

End point description:

Clinical scores (facial Vitiligo Area Scoring Index [F-VASI] and total body Vitiligo Area Scoring Index [T-VASI]) were evaluated for correlation with skin CXCL10 levels.

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

End point timeframe:

Baseline, Week 12, and Week 24

| End point values | Double-Blind Period: Ruxolitinib cream 1.5% BID | Double-Blind Period: Vehicle cream BID | | |
|--------------------------------|--|--|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 38 ^[4] | 17 ^[5] | | |
| Units: correlation coefficient | | | | |
| number (not applicable) | | | | |
| F-VASI | -0.34 | 0.15 | | |
| T-VASI | -0.43 | 0.02 | | |

Notes:

[4] - Participants with values at each of 3 timepoints (Baseline, Week 12, and Week 24) were analyzed.

[5] - Participants with values at each of 3 timepoints (Baseline, Week 12, and Week 24) were analyzed.

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants with treatment-emergent adverse events (TEAEs) during the Double-Blind Period

| | |
|-----------------|--|
| End point title | Number of participants with treatment-emergent adverse events (TEAEs) during the Double-Blind Period |
|-----------------|--|

End point description:

An adverse event (AE) was defined as any untoward medical occurrence associated with the use of a drug in humans, whether or not considered drug-related. An AE could have been any unfavorable or unintended sign (including an abnormal laboratory finding), symptom, or disease (new or exacerbated) temporally associated with the use of study drug. A TEAE was defined as any AE reported for the first time or the worsening of a pre-existing event after the first application of study drug.

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

End point timeframe:

from the time of Informed Consent Form signing until the start of the Treatment-Extension Period or 30 days after the last application of study drug during the Double-Blind Period (up to Week 24 + 30 days)

| End point values | Double-Blind Period: Ruxolitinib cream 1.5% BID | Double-Blind Period: Vehicle cream BID | | |
|-----------------------------|--|--|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 41 | 19 | | |
| Units: participants | 19 | 7 | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants with TEAEs during the Treatment-Extension Period

| | |
|-----------------|---|
| End point title | Number of participants with TEAEs during the Treatment-Extension Period |
|-----------------|---|

End point description:

An AE was defined as any untoward medical occurrence associated with the use of a drug in humans, whether or not considered drug-related. An AE could have been any unfavorable or unintended sign (including an abnormal laboratory finding), symptom, or disease (new or exacerbated) temporally associated with the use of study drug. A TEAE was defined as any AE reported for the first time or the worsening of a pre-existing event after the first application of study drug.

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

End point timeframe:

from the completion of the Week 24 assessments until at least 30 days after the last application of study drug at Week 52 + 30 days

| End point values | Treatment-Extension (TE) Period: Ruxolitinib cream 1.5% BID | TE Period: Vehicle cream to Ruxolitinib cream 1.5% BID | | |
|-----------------------------|--|---|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 37 | 14 | | |
| Units: participants | 12 | 3 | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants with a Grade 3 or higher TEAE during the Double-Blind Period

| | |
|-----------------|---|
| End point title | Number of participants with a Grade 3 or higher TEAE during the Double-Blind Period |
|-----------------|---|

End point description:

An AE was defined as any untoward medical occurrence associated with the use of a drug in humans, whether or not considered drug-related. A TEAE was defined as any AE reported for the first time or the worsening of a pre-existing event after the first application of study drug. AE severity was assessed per the Common Terminology Criteria for Adverse Events (CTCAE), version 5.0: Grade 1: mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; treatment not indicated; Grade 2: moderate; minimal, local, or noninvasive treatment indicated; limiting age-appropriate activities of daily living; Grade 3: severe or medically significant but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; limiting self-care activities of daily living; Grade 4: life-threatening consequences; urgent treatment indicated; Grade 5: fatal.

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

End point timeframe:

from the time of Informed Consent Form signing until the start of the Treatment-Extension Period or 30 days after the last application of study drug during the Double-Blind Period (up to Week 24 + 30 days)

| End point values | Double-Blind Period: Ruxolitinib cream 1.5% BID | Double-Blind Period: Vehicle cream BID | | |
|-----------------------------|--|--|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 41 | 19 | | |
| Units: participants | 1 | 0 | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants with a Grade 3 or higher TEAE during the Treatment-Extension Period

| | |
|-----------------|--|
| End point title | Number of participants with a Grade 3 or higher TEAE during the Treatment-Extension Period |
|-----------------|--|

End point description:

An AE was defined as any untoward medical occurrence associated with the use of a drug in humans, whether or not considered drug-related. A TEAE was defined as any AE reported for the first time or the worsening of a pre-existing event after the first application of study drug. AE severity was assessed per the CTCAE, version 5.0: Grade 1: mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; treatment not indicated; Grade 2: moderate; minimal, local, or noninvasive treatment indicated; limiting age-appropriate activities of daily living; Grade 3: severe or medically significant but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; limiting self-care activities of daily living; Grade 4: life-threatening consequences; urgent treatment indicated; Grade 5: fatal.

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

End point timeframe:

from the completion of the Week 24 assessments until at least 30 days after the last application of study drug at Week 52 + 30 days

| End point values | Treatment-Extension (TE) Period: Ruxolitinib cream 1.5% BID | TE Period: Vehicle cream to Ruxolitinib cream 1.5% BID | | |
|-----------------------------|--|---|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 37 | 14 | | |
| Units: participants | 0 | 1 | | |

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

from the time of Informed Consent Form signing until at least 30 days after the last application of study drug (up to Week 52 + 30 days)

Adverse event reporting additional description:

For the Double-Blind Period, TEAEs are reported for members of the Safety Population: all participants who applied ruxolitinib cream or vehicle cream at least once. For the Treatment-Extension (TE) Period, TEAEs are reported for the TE Evaluable Population: all participants who applied ruxolitinib cream at least once in the TE Period.

| | |
|-----------------|------------|
| Assessment type | Systematic |
|-----------------|------------|

Dictionary used

| | |
|--------------------|--------|
| Dictionary name | MedDRA |
| Dictionary version | 22 |

Reporting groups

| | |
|-----------------------|----------------------------|
| Reporting group title | Ruxolitinib cream 1.5% BID |
|-----------------------|----------------------------|

Reporting group description:

Participants applied ruxolitinib cream during the Double-Blind Treatment Period and the Treatment-Extension Period. Participants applied ruxolitinib 1.5% cream BID for 24 weeks. Participants who completed the Week 24 assessments with no safety concerns could continue into the 28-week Treatment-Extension Period. Participants who applied ruxolitinib cream 1.5% BID during the Double-Blind Period continued to apply ruxolitinib cream 1.5% BID for an additional 28 weeks in the Treatment-Extension Period. Participants who applied vehicle cream BID during the Double-Blind Period applied ruxolitinib cream 1.5% BID for 28 weeks in the Treatment-Extension Period.

| | |
|-----------------------|-------------------|
| Reporting group title | Vehicle cream BID |
|-----------------------|-------------------|

Reporting group description:

Participants applied matching vehicle cream twice a day (BID) for 24 weeks in the Double-Blind Period.

| Serious adverse events | Ruxolitinib cream 1.5% BID | Vehicle cream BID | |
|---|----------------------------|-------------------|--|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 1 / 55 (1.82%) | 0 / 19 (0.00%) | |
| number of deaths (all causes) | 0 | 0 | |
| number of deaths resulting from adverse events | 0 | 0 | |
| Cardiac disorders | | | |
| Acute coronary syndrome | | | |
| subjects affected / exposed | 1 / 55 (1.82%) | 0 / 19 (0.00%) | |
| occurrences causally related to treatment / all | 0 / 1 | 0 / 0 | |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | |

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

| Non-serious adverse events | Ruxolitinib cream 1.5% BID | Vehicle cream BID | |
|---|-------------------------------|-------------------|--|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 10 / 55 (18.18%) | 7 / 19 (36.84%) | |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) | | | |
| Seborrhoeic keratosis | | | |
| subjects affected / exposed | 0 / 55 (0.00%) | 1 / 19 (5.26%) | |
| occurrences (all) | 0 | 1 | |
| Congenital, familial and genetic disorders | | | |
| Hydrocele | | | |
| subjects affected / exposed | 0 / 55 (0.00%) | 1 / 19 (5.26%) | |
| occurrences (all) | 0 | 1 | |
| General disorders and administration site conditions | | | |
| Application site exfoliation | | | |
| subjects affected / exposed | 1 / 55 (1.82%) | 1 / 19 (5.26%) | |
| occurrences (all) | 1 | 1 | |
| Skin and subcutaneous tissue disorders | | | |
| Dermatitis contact | | | |
| subjects affected / exposed | 0 / 55 (0.00%) | 1 / 19 (5.26%) | |
| occurrences (all) | 0 | 1 | |
| Infections and infestations | | | |
| COVID-19 | | | |
| subjects affected / exposed | 9 / 55 (16.36%) | 2 / 19 (10.53%) | |
| occurrences (all) | 9 | 2 | |
| Urinary tract infection | | | |
| subjects affected / exposed | 0 / 55 (0.00%) | 1 / 19 (5.26%) | |
| occurrences (all) | 0 | 1 | |
| Gastroenteritis | | | |
| subjects affected / exposed | 0 / 55 (0.00%) | 1 / 19 (5.26%) | |
| occurrences (all) | 0 | 1 | |

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported