



# Platform Study of Novel Ruxolitinib Combinations in Myelofibrosis Patients

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## Main Information

**Primary registry identifying number**

LBCTR2022035001

**Protocol number**

CINC424H12201

**MOH registration number**

**Study registered at the country of origin**

Yes

**Study registered at the country of origin: Specify**

**Type of registration**

Prospective

**Type of registration: Justify**

N/A

**Date of registration in national regulatory agency**

**Primary sponsor**

Novartis Pharmaceuticals

**Primary sponsor: Country of origin**

Novartis Pharmaceuticals

**Date of registration in primary registry**

12/08/2022

**Date of registration in national regulatory agency**

**Public title**

Platform Study of Novel Ruxolitinib Combinations in Myelofibrosis Patients

**Acronym**

ADORE

**Scientific title**

A Randomized, Open-label, Phase I/II Open Platform Study Evaluating Safety and Efficacy of Novel Ruxolitinib Combinations in Myelofibrosis Patients

**Acronym**

**Brief summary of the study: English**

The purpose of this study is to investigate the safety, pharmacokinetics and preliminary efficacy of combinations treatment of ruxolitinib with 5 novel compounds: siremadlin, crizanlizumab, sabatolimab, LTT462 and NIS793 in myelofibrosis (MF) subjects.

**Brief summary of the study: Arabic**

دراسة لتقييم سلامة وفعالية استعمالات روكسوليتينيب مع أدوية جديدة لدى مرضى التليف النقوي

**Health conditions/problem studied: Specify**

Myelofibrosis

**Interventions: Specify**

- Drug: Ruxolitinib  
5 mg tablets for oral use  
Other Name: INC424, Jakavi  
- Drug: Siremadlin  
10 mg, 20 mg, or 40 mg capsules for oral use  
Other Name: HDM201  
- Drug: Crizanlizumab  
100 mg/mL concentrate for infusion for intravenous use  
Other Name: SEG101



- Drug: Sabatolimab  
100 mg/mL or 400 mg/4 mL concentrate for infusion for intravenous use  
Other Name: MBG453  
- Drug: LTT462  
100 mg capsule for oral use  
- Drug: NIS793  
700 mg/7 mL concentrate for intravenous use

**Key inclusion and exclusion criteria: Inclusion criteria**

- Subjects have diagnosis of primary myelofibrosis (PMF) according to the 2016 World Health Organization (WHO) criteria, or diagnosis of post-essential thrombocythemia (ET) (PET-MF) or post-polycythemia vera (PV) myelofibrosis (PPV-MF) according to the International Working Group for Myelofibrosis Research and Treatment (IWG-MRT) 2007 criteria
- Palpable spleen of at least 5 cm from the left costal margin (LCM) to the point of greatest splenic protrusion or enlarged spleen volume of at least 450 cm<sup>3</sup> per MRI or CT scan at baseline (a MRI/CT scan up to 8 weeks prior to first dose of study treatment can be accepted).
- Have been treated with ruxolitinib for at least 24 weeks prior to first dose of study treatment
- Are stable (no dose adjustments) on the prescribed ruxolitinib dose (between 5 and 25 mg twice a day (BID)) for ≥ 8 weeks prior to first dose of study treatment

**Key inclusion and exclusion criteria: Gender**

Both

**Key inclusion and exclusion criteria: Specify gender**

**Key inclusion and exclusion criteria: Age minimum**

18

**Key inclusion and exclusion criteria: Age maximum**

99

**Key inclusion and exclusion criteria: Exclusion criteria**

- Not able to understand and to comply with study instructions and requirements.
- Received any investigational agent for the treatment of MF (except ruxolitinib) within 30 days of first dose of study treatment or within 5 half-lives of the study treatment, whichever is greater
- Peripheral blood blasts count of > 10%.
- Received a monoclonal antibody (Ab) or immunoglobulin-based agent within 1 year of screening, or has documented severe hypersensitivity reactions/immunogenicity (IG) to a prior biologic
- Splenic irradiation within 6 months prior to the first dose of study drug
- Received blood platelet transfusion within 28 days prior to first dose of study treatment.

**Type of study**

Interventional

**Type of intervention**

Pharmaceutical

**Type of intervention: Specify type**

N/A

**Trial scope**

Therapy

**Trial scope: Specify scope**

N/A

**Study design: Allocation**

Randomized controlled trial

**Study design: Masking**

Open (masking not used)

**Study design: Control**

Active

**Study phase**

1 to 2

**Study design: Purpose**

Treatment

**Study design: Specify purpose**

N/A

**Study design: Assignment**

Parallel

**Study design: Specify assignment**

N/A

**IMP has market authorization**

No

**IMP has market authorization: Specify**

**Name of IMP**

Ruxolitinib

**Year of authorization**

**Month of authorization**

**Type of IMP**



Immunological

**Pharmaceutical class**

Janus Associated Kinase Inhibitor

**Therapeutic indication**

Myelofibrosis

**Therapeutic benefit**

progression free survival (PFS)

**Study model**

N/A

**Study model: Explain model**

N/A

**Study model: Specify model**

N/A

**Time perspective**

N/A

**Time perspective: Explain time perspective**

N/A

**Time perspective: Specify perspective**

N/A

**Target follow-up duration**

**Target follow-up duration: Unit**

**Number of groups/cohorts**

**Biospecimen retention**

Samples without DNA

**Biospecimen description**

Samples will be shipped to Covance Central Lab

**Target sample size**

4

**Actual enrollment target size**

**Date of first enrollment: Type**

Anticipated

**Date of first enrollment: Date**

28/04/2022

**Date of study closure: Type**

Anticipated

**Date of study closure: Date**

16/01/2024

**Recruitment status**

Suspended

**Recruitment status: Specify**

**Date of completion**

20/07/2022

**IPD sharing statement plan**

**IPD sharing statement description**



Yes

Novartis is committed to sharing with qualified external researchers, access to patient-level data and supporting clinical documents from eligible studies. These requests are reviewed and approved by an independent expert panel on the basis of scientific merit. All data provided is anonymized to respect the privacy of patients who have participated in the trial in line with applicable laws and regulations.

This trial data is currently available according to the process described on [www.clinicalstudydatarequest.com](http://www.clinicalstudydatarequest.com).

**Additional data URL**

<https://clinicaltrials.gov/ct2/show/record/NCT04097821?term=CINC424H12201&draw=2&rank=1>

**Admin comments**

**Trial status**

Approved

## Secondary Identifying Numbers

| Full name of issuing authority | Secondary identifying number |
|--------------------------------|------------------------------|
| Clinicaltrials.gov             | NCT04097821                  |

## Sources of Monetary or Material Support

| Name                     |
|--------------------------|
| Novartis Pharmaceuticals |

## Secondary Sponsors

| Name |
|------|
| N/A  |

## Contact for Public/Scientific Queries

| Contact type | Contact full name | Address                                | Country | Telephone       | Email                         | Affiliation                                  |
|--------------|-------------------|--|---------|-----------------|-------------------------------|--|
| Public       | Ali Taher         | Beirut                                 | Lebanon | +9613755669     | ataher@aub.edu.lb             | American University of Beirut Medical Center |
| Scientific   | Hind Khairallah   | KFF Healthcare - Khalil Fattal et fils | Lebanon | +9611512002#271 | Hind.Khairallah@fattal.com.lb | Khalil Fattal et Fils Sal                    |



## Centers/Hospitals Involved in the Study

| Center/Hospital name                         | Name of principles investigator | Principles investigator speciality | Ethical approval |
|--|---------------------------------|------------------------------------|------------------|
| American University of Beirut Medical Center | Ali Taher                       | Hematology-Oncology                | Approved         |

## Ethics Review

| Ethics approval obtained                     | Approval date | Contact name | Contact email   | Contact phone                  |
|--|---------------|--------------|-----------------|--------------------------------|
| American University of Beirut Medical Center | 24/01/2022    | Fuad Ziyadeh | fz05@aub.edu.lb | +961 (0) 1 350 000<br>ext:5445 |

## Countries of Recruitment

| Name               |
|--------------------|
| Australia          |
| Belgium            |
| Canada             |
| Denmark            |
| Germany            |
| Hungary            |
| Italy              |
| Netherlands        |
| Russian Federation |
| Spain              |
| Sweden             |
| Switzerland        |
| United Kingdom     |
| Lebanon            |



## Health Conditions or Problems Studied

| Condition     | Code   | Keyword       |
|---------------|--|---------------|
| Myelofibrosis | Other specified diseases of blood and blood-forming organs (D75.8) | Myelofibrosis |

## Interventions

| Intervention                   | Description                    | Keyword                        |
|--------------------------------|--------------------------------|--------------------------------|
| Consenting, IMP administration | Consenting, IMP administration | Consenting, IMP administration |

## Primary Outcomes

| Name  | Time Points                                    | Measure  |
|---|--|--|
| Incidence of dose limiting toxicities within the first 2 cycles | Baseline to the end of Cycle 2 (6 or 8 weeks)  | Incidence and severity of dose limiting toxicities within the first 2 cycles (6 or 8 weeks) in Part 1 of the study   |
| Response rate at the end of cycle 6 or cycle 8                  | Baseline to the end of Cycle 6 or 8 (24 weeks) | Composite of anemia improvement (hemoglobin level) and no spleen volume progression and no symptom worsening in Part 2 and Part 3 of the study. For a subject to be considered a responder, all three components of the composite have to be fulfilled |

## Key Secondary Outcomes

| Name  | Time Points  | Measure  |
|---|--|--|
| Proportion of subjects achieving an improvement in hemoglobin level of $\geq 1.5$ g/dL from baseline          | Baseline to the end of Cycle 6 or 8 (24 weeks), and end of Cycle 12 or 16 (48 weeks)   | Proportion of subjects achieving an improvement in hemoglobin level of at least $\geq 1.5$ g/dL from baseline at each time point in Part 2 and Part 3 of the study.  |
| Proportion of subjects achieving an improvement in hemoglobin level of at least $\geq 2.0$ g/dL from baseline | Baseline to the end of Cycle 6 or 8 (24 weeks), and end of Cycle 12 or 16 (48 weeks)   | Proportion of subjects achieving an improvement in hemoglobin level of at least $\geq 2.0$ g/dL from baseline at each time point in Part 2 and Part 3 of the study   |
| Change in spleen length from baseline   | Baseline to day 1 and day 15 of Cycle 1, 2 and 3, day 1 of all subsequent cycles, and the end of 12 or 16 cycles (48 weeks)  | Change in spleen length measured in centimeters by manual palpation summarized at each time point using descriptive statistics in Part 2 and Part 3 of the study   |
| Change in spleen volume from baseline   | Baseline to the end of Cycle 6 or 8 (24 weeks), the end of Cycle 12 or 16 (48 weeks) and at the end of treatment if not performed in the past 12 weeks (up to 48 weeks)  | Change in spleen volume measured by magnetic resonance imaging (MRI) or computed tomography (CT) summarized at each time point using descriptive statistics, in Part 2 and Part 3 of the study   |
| Change in symptoms of MFSAF v4.0 from baseline  | Baseline to day 1 of Cycle 1, day 1 of all subsequent cycles of treatment (each cycle is 28 days except for arms containing NIS793, which are 21 days), as well as the end of treatment visit (approximately 52 weeks) | Change in total symptom scores (TSS) assessed by the Myelofibrosis (MF Symptom Assessment Form version 4.0 (MFSAF v4.0) at each time point in Part 2 and Part 3 of the study. The MFSAF v4.0 questionnaire focuses on the 7 core symptoms of MF: fatigue, night sweats, pruritus, abdominal discomfort, pain under the ribs on the left side, early satiety and bone pain. Subjects record symptom severity at it worst for each of the 7 symptoms on an 11-point numeric rating scale, from 0 (absent) to 10 (worst imaginable). The Total Symptom Score (TSS) is the sum of all the scores for all 7 symptoms. |



|  |  |   |
|--|--|---|
| Change in symptoms of EORTC QLQ-C30 from baseline  | Baseline to day 1 of Cycle 1, day 1 of all subsequent cycles of treatment (each cycle is 28 days except for arms containing NIS793, which are 21 days), as well as the end of treatment visit (approximately 52 weeks) | Change in symptom scores assessed by European Organization for Research and Treatment of Cancer 30-item core quality of life questionnaire (EORTC QLQ C-30) at each time point in Part 2 and Part 3 of the study. The EORTC QLQ-C30 includes 5 functional scales (physical, emotional, social, role, cognitive), eight symptom scales (fatigue, pain, nausea/vomiting, constipation, diarrhea, insomnia, dyspnea, and appetite loss), as well as global health/quality-of-life and financial impact. Subjects respond according to the past week recall period, with the exception of the first 5 questions that represent physical functioning and capture the subject's current status. Raw scores are linearly converted to a 0-100 scale. For functional and global health status/QoL higher scores indicate better QoL and level of functioning; for symptom scales, higher scores indicate greater level of symptoms or difficulties. |
| Progression free survival, per progressive splenomegaly, accelerated phase, deteriorating cytopenia, leukemic transformation or death from any cause | Baseline to disease progression, which is up to 24 weeks for Part 1 or through study completion, an average of 1 year, for Part 2 and Part 3   | Progressive splenomegaly is assessed by increasing spleen volume (by MRI/CT) of $\geq 25\%$ from baseline. Accelerated phase: a circulating peripheral blood blast content of $> 10\%$ but $< 20\%$ confirmed after 2 weeks. Deteriorating cytopenia (dCP) independent from treatment defined for all patients by platelet count $< 35 \times 10^9/L$ or neutrophil count $< 0.75 \times 10^9/L$ that lasts for at least 4 weeks. Leukemic transformation, a peripheral blood blast content of $\geq 20\%$ associated with an absolute blast count of $\geq 1 \times 10^9/L$ that lasts for at least 2 weeks or a bone marrow blast count of $\geq 20\%$ .  |
| Proportion of subjects achieving an improvement in bone marrow fibrosis of $\geq 1$ grade from baseline  | Baseline to the end of Cycle 6 or 8 (24 weeks), the end of Cycle 12 or 16 (48 weeks) and at the end of treatment if not performed in the past 12 weeks (up to 48 weeks)  | Proportion of subjects achieving an improvement in bone marrow fibrosis of $\geq 1$ grade at each time point will be summarized in Part 2 and Part 3 of the study.  |
| Area under the Plasma Concentration versus Time Curve (AUC)  | Days 1 and 5 of Cycle 1 and 2 for siremadlin and ruxolitinib, and Cycle 1 and Cycle 3 for crizanlizumab, sabatolimab and NIS793, and Days 1 and 15 of Cycle 1 for LTT462   | AUC for each investigational drug in Part 1, Part 2 and Part 3 of the study   |
| Maximum (peak) observed plasma drug concentration (Cmax)   | Days 1 and 5 of Cycle 1 and 2 for siremadlin and ruxolitinib, and Cycle 1 and Cycle 3 for crizanlizumab, sabatolimab and NIS793, and Days 1 and 15 of Cycle 1 for LTT462   | Cmax for each investigational drug in Part 1, Part 2 and Part 3 of the study  |
| Time to reach maximum (peak) plasma, blood, serum or other body fluid drug concentration after single dose administration (Tmax)                     | Days 1 and 5 of Cycle 1 and 2 for siremadlin and ruxolitinib, and Cycle 1 and Cycle 3 for crizanlizumab, sabatolimab and NIS793, and Days 1 and 15 of Cycle 1 for LTT462   | Tmax for each investigational drug in Part 1, Part 2 and Part 3 of the study  |
| Concentration versus time profile  | Days 1 and 5 of Cycle 1 and 2 for siremadlin and ruxolitinib, and Cycle 1 and Cycle 3 for crizanlizumab, sabatolimab and NIS793, and Days 1 and 15 of Cycle 1 for LTT462   | Concentration versus time profile for each investigational drug in Part 1, Part 2 and Part 3 of the study   |
| Presence and/or concentration of anti-drug antibody  | Baseline to 105 days after last study drug administration for crizanlizumab, to 150 days after last study drug administration for sabatolimab, or to 90 days after last study drug administration for NIS793           | The presence and titer of anti-drug antibodies for crizanlizumab, sabatolimab and NIS793 in Part 1, Part 2 and Part 3 of the study  |



## Trial Results

**Summary results**

**Study results globally**

**Date of posting of results summaries**

**Date of first journal publication of results**

**Results URL link**

**Baseline characteristics**

**Participant flow**

**Adverse events**

**Outcome measures**

**URL to protocol files**