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A study to compare how the body processes first and second generation RO7490677 (recombinant human pentraxin-2; rhPTX-2) drug products in healthy participants

Submission date
21/06/2022

Recruitment status
No longer recruiting

Registration date
22/06/2022

Overall study status
Completed

Last Edited
24/04/2024

Condition category
Other

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims:
The study drug (RO7490677) is an experimental drug being studied in patients with Idiopathic pulmonary fibrosis (IPF). It has not been approved by health authorities.
The purpose of this study is to look at how much of the study drug gets into the blood stream (and so can have an active effect) and how long it takes the body to get rid of it when given as single doses of two different formulations (1st generation study drug compared to 2nd generation study drug) seven days apart. The safety and tolerability of the study drug will be evaluated, and information about any side effects that may occur will also be collected. In addition, the response of the participants body's natural defences (immune system's) to the study drug will be evaluated.

Who can participate?
Healthy volunteers who are between 18 and 70 years of age, both inclusive, can participate.

What does the study involve?
Participants will be a part of this study for a maximum of 7 weeks.
This study will be conducted in three parts:
1. Screening Period: Participants will have to undergo certain test to see if they are eligible to participate in the study. There will be one screening visit 5 weeks before start of the study
2. Treatment Period: Participants will be asked to reach the clinic one day prior to dosing to begin the in-clinic stay. They will be asked to stay at the research unit for approximately 16 days /15 nights. Few tests will be performed prior to dosing. The participant will be dosed with either 1st generation or 2nd generation of the test drug on Day 1 and the other formulation on Day 8. The order in which the participant receives the formulations (1st or 2nd generation) will be determined by chance, like flipping a coin. There will be a time in which no dosing is given t (washout period) of 7 days between each dosing.

What are the possible benefits and risks of participating?
Participation in this study is purely for research purposes and will not improve the participant's health or treat any medical problem they may have. The participants may benefit by having physical examinations in which the results of laboratory tests done will be made available upon request. Participants will receive a compensation of up to $5,680.00 for taking part in this research study. RO7490677 is an experimental drug and has had limited testing in humans. There may be side effects that are not known at this time. The potential side effects of this drug are listed below:

Infusion-Related Reaction: Symptoms may include fever, chills, dizziness (caused by low blood pressure), rash, headache, nausea, or vomiting.
Anaphylaxis or Hypersensitivity: Allergic reactions can happen with any drug. These can be in the form of hives on the skin, itchiness of the skin, extremely low blood pressure or dizziness, swelling of the throat, difficulty breathing, or loss of consciousness
Immunogenicity: There is a chance that the immune system might develop special antibodies (proteins made in the body that respond to a substance that is foreign to the body) to this study drug.
Pregnancy Risk: No humans have become pregnant while being treated with RO7490677, so it is unknown whether this is a risk for humans
The most common side effects were tiredness (fatigue) and headache.
Few other side effects were cough, common cold (nasopharyngitis), worsening of idiopathic pulmonary fibrosis, diarrhea, and inflammation of the airways (bronchitis)
Side effects seen in more than 10% of patients were tiredness (fatigue), cough, diarrhea, nausea, joint stiffness (arthralgia), headache, and abdominal pain

There may be a risk in exposing an unborn child to study drug, and all risks are not known at this time.

Where is the study run from?
F. Hoffmann-La Roche Ltd (USA)

When is the study starting and how long is it expected to run for?
April 2022 to April 2023

Who is funding the study?
F. Hoffmann-La Roche Ltd (USA)

Who is the main contact?
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Contact information

Type(s)
Public

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Additional identifiers

Protocol serial number
GP44111

Study information

Scientific Title
A phase 1 double-blind, randomized, two-arm, two-way crossover, sequential two-stage study to assess the pharmacokinetic comparability of first and second generation RO7490677 (recombinant human pentraxin-2; rhPTX-2) drug products in healthy subjects

Study objectives
The main purpose of this study is to assess the pharmacokinetic (PK) comparability of the 1st and 2nd generation drug products of RO7490677 and to also determine the safety of RO7490677 and immune response to RO7490677.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 16/05/2022, Salus IRB (2111 West Braker Lane, Suite 100, Austin, TX 78758, USA; +1 512-380-1244; salus@salusirb.com), ref: none provided

Primary study design
Interventional

Study design
Phase 1 randomized double-blind two-arm two-way crossover sequential two-stage interventional study

Study type(s)
Other

Health condition(s) or problem(s) studied
Healthy participants

Interventions
1. Stage 1 Sequence 1: Participants will first receive a single dose of 1st generation RO7490677, 10 milligrams per kilogram (mg/kg), intravenous (IV) infusion, on Day 1. After a washout period of 7 days, participants will then receive and a single dose of 2nd generation RO7490677, 10 mg

/kg, IV infusion on Day 8.
2. Stage 1 Sequence 2: Participants will first receive a single dose of 2nd generation RO7490677, 10 mg/kg, IV infusion, on Day 1. After a washout period of 7 days, participants will then receive and a single dose of 1st generation RO7490677, 10 mg/kg, IV infusion on Day 8.
3. Stage 2 Sequence 1: Participants will first receive a single dose of 1st generation RO7490677, 10 mg/kg, IV infusion, on Day 1. After a washout period of 7 days, participants will then receive a single dose of 2nd generation RO7490677, 10 mg/kg, IV infusion on Day 8.
4. Stage 2 Sequence 2: Participants will first receive a single dose of 2nd generation RO7490677, 10 mg/kg, IV infusion, on Day 1. After a washout period of 7 days, participants will then receive a single dose of 1st generation RO7490677, 10 mg/kg, IV infusion on Day 8.

Randomization will be handled on an agreed upon randomization scheme performed by the CRO.

Intervention Type
Drug

Phase
Phase I

Drug/device/biological/vaccine name(s)
RO7490677

Primary outcome(s)
1. Maximum plasma concentration (Cmax) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
2. Area Under the Concentration-Time Curve from Hour 0 to the Last Measurable Concentration (AUC0-t) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
3. Area Under the Concentration-Time Curve extrapolated to Infinity (AUC0-∞) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
4. Percentage of Participants with Adverse Events (AEs) Measured from Screening to 28 days after last dose of study drug (approximately Day 36)
5. Percentage of Participants with Clinically Significant Laboratory Findings Measured Using Blood and Urine Samples from Screening, up to Day 15
6. Percentage of Participants with Clinically Significant Abnormalities in Electrocardiogram (ECG) Parameters Measured Using Single 12-Lead ECG from Screening, up to Day 15
7. Percentage of Participants with Clinically Significant Changes in Vital Sign Values Measured Using Oral Temperature, Respiratory Rate, and Supine Blood Pressure and Pulse Measured from Screening up to Day 15
8. Percentage of Participants with Clinically Significant Changes in Physical Examinations Measured by Assessment of general appearance; skin; thorax/lungs; abdomen; lymph nodes; head; ears; eyes; nose, throat; neck (including thyroid); and cardiovascular, musculoskeletal, and neurological systems Performed at Screening, and on other timepoints at the investigator's discretion up to Day 15
9. Percentage of Participants with Anti-drug Antibodies (ADAs) Measured Using Serum Samples from Baseline up to Day 15

Key secondary outcome(s)
1. Time to Achieve Cmax (Tmax) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
2. AUC from Hour 0 to 168 hours Post-Dose (AUC0-168h) of RO7490677 Measured Using Plasma

Samples at Multiple Timepoints from Day 1 to Day 15
3. Percentage of AUC that is due to Extrapolation from the Last Measurable Concentration to Infinity (%AUCextrap) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
4. Terminal Elimination Half-Life (t1/2) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
5. Terminal Elimination Rate Constant (λz) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
6. Systemic Clearance (CL) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
7. Volume of Distribution during the Terminal Phase (Vz) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15
8. Volume of Distribution at Steady State (Vss) of RO7490677 Measured Using Plasma Samples at Multiple Timepoints from Day 1 to Day 15

Completion date
11/04/2023

Eligibility

Key inclusion criteria
1. Age between 18 and 70 years, both inclusive
2. Within body mass index (BMI) range 18.0 to 36.0 kilogram per square metre (kg/m²), both inclusive
3. Negative hepatitis panel (hepatitis B surface antigen, hepatitis B virus core antibody total, and hepatitis C virus antibody) and negative human immunodeficiency virus (HIV) p24 antigen /antibody screens
4. Negative screening test for active or latent Mycobacterium tuberculosis (TB) infection by QuantiFERON® TB Gold Plus
Other protocol-specified inclusion criteria may apply.

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Upper age limit
70 Years

Sex
All

Total final enrolment

Key exclusion criteria
1. Significant history or clinical manifestation of any metabolic, allergic, dermatological, hepatic, renal, hematological, pulmonary, cardiovascular, gastrointestinal, immunological, neurological, or psychiatric disorder; acute infection; or other unstable medical disease, as determined by the investigator
2. History of moderate or severe allergic, anaphylactic, or other hypersensitivity reactions to chimeric, human, or humanized antibodies or fusion proteins
3. History or presence of any malignancy, except for completely excised basal cell or squamous cell carcinoma of the skin
4. History or presence of a clinically significant ECG abnormality, as determined by the investigator, or known history of family history of a prolonged QT interval syndrome
5. History or presence of atrial fibrillation
6. History of uncontrolled hypertension, hyperlipidemia, thyroid disorder, or diabetes, as determined by the investigator
7. History of active or latent TB, regardless of treatment history
8. Use of oral antibiotics within 4 weeks or IV antibiotics within 8 weeks prior to Screening
9. Administration of a vaccine (including seasonal flu, H1N1, and Coronavirus Disease 2019 [COVID-19] vaccine) in the past 30 days prior to dosing
10. Evidence of current/positive test result for severe acute respiratory syndrome coronavirus 2 (i.e., the virus that causes COVID-19) infection at Screening or Check-in
11. Donation of blood within 30 days prior to Screening through study completion, inclusive, or of plasma within 2 weeks prior to Screening through study completion, both inclusive
12. Receipt of blood products within 2 months prior to Check-in
13. Female participants who are pregnant, lactating, or breastfeeding.
Other protocol-specified exclusion criteria may apply.

Date of first enrolment
30/06/2022

Date of final enrolment
28/02/2023

Locations

Countries of recruitment
United States of America

Study participating centre
Labcorp Clinical Research Unit
United States of America
75247

Sponsor information

Organisation
F. Hoffmann-La Roche Ltd

Funder(s)

Funder type
Industry

Funder Name
F. Hoffmann-La Roche

Alternative Name(s)
Hoffman-La Roche, F. Hoffmann-La Roche Ltd.

Funding Body Type
Private sector organisation

Funding Body Subtype
For-profit companies (industry)

Location
Switzerland

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available due to participant-level data not being a regulatory requirement

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		23/04/2024	24/04/2024	Yes	No