

A study to evaluate the effect of highly reduced kidney function on the processing of fenebrutinib in the body

Submission date 05/10/2023	Recruitment status No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 10/10/2023	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 13/05/2024	Condition category Other	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

A disease of the brain and spinal cord (central nervous system) called multiple sclerosis (MS), is a long-lasting (chronic) disease in which the body attacks the protective covering around nerves and damages the nerves. Fenebrutinib is an experimental drug being developed for the treatment of MS. Health authorities have not yet approved fenebrutinib for the treatment of MS. The main aim of the study is to find out how severe kidney damage (severe renal impairment) will affect the breakdown and removal of the study drug (fenebrutinib) from the body (this is called pharmacokinetics [PK]).

Who can participate?

People between 18 to 75 years of age with normal kidney function or severe kidney damage (severe renal impairment) can participate in this study.

What does the study involve?

Participants will be part of this study for approximately 5 weeks. The study will be conducted in the following parts:

1. A screening period of up to 28 days to check the eligibility of participants to take part in the study.
2. A dosing/treatment period during which participants with normal kidney function and severe kidney damage will receive a single dose of fenebrutinib, by mouth (orally) on Day 1. Participants will have to get admitted to the clinic 1 day before receiving the treatment (Day -1) and stay in the clinic until Day 4.
3. A follow-up phone call to check on the participant will be made 7 days after the study drug administration to check on their well-being.

What are the possible benefits and risks of participating?

Fenebrutinib is an experimental drug and is being given purely for research purposes, it is not

intended that participants will receive any benefit from this study, but the information learned from this study may be useful to treat future patients of multiple sclerosis. Participants may receive monetary compensation for taking part in the study.

Participants may have side effects due to fenebrutinib, or procedures used in this study. Side effects can be mild to severe and even life threatening or fatal, and they can vary from person to person. Full information on risks associated with fenebrutinib is provided to volunteers in the Informed Consent Form. When investigating new medicines there is also a risk of unexpected side effects and occasionally allergic reactions. All volunteers will be closely monitored during the study and safety assessments will be performed at regular intervals. Risks are further mitigated by ensuring that only volunteers who meet all inclusion/exclusion criteria are included and that if the safety of any volunteer represents a concern they will be withdrawn. Blood samples will be collected during the study. Collection of these samples can cause pain, bruising, or infection where the needle is inserted. Electrocardiograms (ECGs) will be taken in this study. ECG patches may cause a skin reaction such as redness or itching, or localized skin discomforts and/or hair loss associated with the placement of ECG leads.

There may be a risk in exposing an unborn child to the study drug, and not all potential risks are known at this time. Women and men must take precautions to avoid exposing an unborn child to the study drug. Participants who are pregnant, become pregnant or are currently breastfeeding cannot take part in the study.

Where is the study run from?
Genentech Inc. (Switzerland)

When is the study starting and how long is it expected to run for?
July 2023 to December 2024

Who is funding the study?
Genentech Inc. (Switzerland)

Who is the main contact?
global.trial_information@roche.com

Contact information

Type(s)
Public, Scientific, Principal Investigator

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number**ClinicalTrials.gov number**

Nil known

Secondary identifying numbers

GP44942

Study information

Scientific Title

A phase I, open-label, single-dose study to evaluate the effect of severe renal impairment on the pharmacokinetics of fenebrutinib

Study objectives

The main purpose of this study is to determine the pharmacokinetics (PK) of a single oral dose of fenebrutinib in participants with severe renal impairment compared with demographically matched healthy participants with normal kidney function.

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 25/08/2023, Salus IRB (2111 West Braker Lane, Suite 100, Austin, Texas, 78758, United States of America; +1 512-380-1244; salus@salusirb.com), ref: None provided

Study design

Phase 1 multicenter non-randomized open-label single-dose parallel-group study

Primary study design

Interventional

Secondary study design

Non randomised study

Study setting(s)

Other

Study type(s)

Other

Participant information sheet

No participant information sheet available

Health condition(s) or problem(s) studied

Multiple sclerosis (MS) (study conducted in volunteers with normal renal function or severe renal impairment)

Interventions

Cohort 1: Participants with normal renal function will receive a single dose of fenebrutinib, 200 milligrams (mg), orally on Day 1.

Cohort 2: Participants with severe renal impairment will receive a single dose of fenebrutinib, 200 mg, orally on Day 1.

Intervention Type

Drug

Pharmaceutical study type(s)

Pharmacokinetic

Phase

Phase I

Drug/device/biological/vaccine name(s)

Fenebrutinib

Primary outcome measure

1. Area under the concentration-time curve (AUC) from hour zero to the last measurable concentration (AUC_{0-t}) of fenebrutinib measured using a validated liquid chromatography with tandem mass spectrometry (LC-MS/MS) assay from the plasma samples collected at multiple time points, from Day 1 to Day 4
2. AUC extrapolated to infinity (AUC_{0-∞}) of fenebrutinib measured using a validated LC-MS/MS assay from the plasma samples collected at multiple time points, from Day 1 to Day 4
3. Maximum observed concentration (C_{max}) of fenebrutinib measured using a validated LC-MS/MS assay from the plasma samples collected at multiple time points, from Day 1 to Day 4

Secondary outcome measures

1. Number of participants with adverse events (AEs), and severity of AEs assessed according to National Cancer Institute Common Terminology Criteria For Adverse Events, version 5.0 (NCI CTCAE v5.0), from screening up to 14 days after the dose of study drug (approximately 6 weeks)

Overall study start date

18/07/2023

Completion date

25/12/2024

Eligibility

Key inclusion criteria

1. Male and female participants between 18 to 75 years of age, inclusive, at screening
2. Body weight ≥ 45 kilograms (kg) and within body mass index (BMI) range 18.0 to 42.0 kilograms per square meter (kg/m²), inclusive

Additional inclusion criteria for participants with normal renal function (Cohort 1) only:

1. In reasonably good health for their age
2. Estimated glomerular filtration rate (eGFR) determined using the Chronic Kidney Disease-Epidemiology Collaboration (CKD-EPI) equation ≥ 90 millilitres per minute (mL/min)
3. Matched to participants with severe renal impairment in sex, age (± 10 years), and body weight ($\pm 15\%$)

Additional inclusion criteria for participants with severe renal impairment (Cohort 2) only:

Participants must have eGFR < 30 mL/min and not be on dialysis and have stable renal function.

Other protocol defined inclusion criteria could apply.

Participant type(s)

Healthy volunteer, Patient

Age group

Adult

Lower age limit

18 Years

Upper age limit

75 Years

Sex

Both

Target number of participants

16

Key exclusion criteria

1. Participants who are pregnant or breastfeeding or intending to become pregnant during the study or within 28 days after the dose of study drug.
2. Clinically significant liver disease, e.g., hepatitis, cirrhosis, and/or confirmed liver enzyme elevations (aspartate aminotransferase [AST], alanine aminotransferase [ALT], or gamma-glutamyl transferase $> 1.5 \times$ upper limits of normal [ULN], or bilirubin $> 1.5 \times$ ULN)
3. History of malignancy within 5 years prior to screening, except for completely excised basal cell carcinoma or squamous cell carcinoma of the skin or cervical carcinoma in situ.
4. Significant illness, including infections, surgery, or hospitalization within the 2 weeks prior to dosing.
5. History of stomach or intestinal surgery or resection that would potentially alter absorption and/or excretion of orally administered drugs, except that uncomplicated hernia repair, appendectomy, and/or cholecystectomy will be allowed.
6. Malabsorption syndrome or other conditions that would interfere with enteral absorption.

Additional exclusion criteria for participants with normal renal function (Cohort 1) only:

Significant history or clinical manifestation of renal injury or disease

Additional exclusion criteria for participants with severe renal impairment (Cohort 2) only:

1. Functioning renal transplant or who are active on the transplant waiting list.

2. Renal impairment due to hepatic disease (hepatorenal syndrome).
3. Blood potassium concentration <3 millimoles per litre (mmol/L) or >6 mmol/L at Screening.
4. Hemoglobin concentration <8.5 grams per decilitre (g/dL) at Screening.

Other protocol defined exclusion criteria could apply.

Date of first enrolment

06/06/2024

Date of final enrolment

18/12/2024

Locations

Countries of recruitment

New Zealand

Study participating centre

NZCR Christchurch

264 Antigua Street

Christchurch

New Zealand

8011

Sponsor information

Organisation

Genentech, Inc

Sponsor details

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Sponsor type

Industry

Website

<https://www.roche.com/about/>

Funder(s)

Funder type

Industry

Funder Name

Genentech, Inc

Results and Publications

Publication and dissemination plan

Planned publication in a high-impact peer-reviewed journal

Intention to publish date

25/12/2025

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