A study to investigate the safety, tolerability, pharmacokinetics, and pharmacodynamics of selnofast in participants with early idiopathic Parkinson's disease

Submission date 07/12/2021	Recruitment status No longer recruiting	[X] Prospectively registered [_] Protocol
Registration date 29/04/2022	Overall study status Completed	 Statistical analysis plan Results
Last Edited 26/07/2024	Condition category Nervous System Diseases	 Individual participant data Record updated in last year

Plain English summary of protocol

Background and study aims:

Parkinson's disease (PD) is a progressive and incurable disease that affects the nervous system. It is caused by the loss of brain cells that produce dopamine, a chemical that helps brain cells communicate and control movement. The main symptoms include decreased mobility, rigidity or stiffness of arms, legs and trunk, and resting tremors (shaking that occurs at rest). Evidence suggests that people with PD may have increased inflammation (swelling) in the brain. A protein called NLRP3 is thought to play a key role in this inflammatory process. Selnoflast is a new drug that has been developed to slow the progression of disease in people with early PD. Selnoflast acts by blocking NLRP3, which might lower the inflammation in the brain. Health authorities have not yet approved selnoflast for the treatment of PD or any other disease. The main purpose of this study is:

-To determine how safe and tolerable selnoflast is when compared to a placebo (medicine without an active ingredient)

-To determine how selnoflast is absorbed, distributed and, eventually eliminated from the body -To assess the effect of selnoflast on the inflammation in the brain using certain scans called the TSO-PET scans

Who can participate?

People aged between 40 to 85 years with PD.

What does the study involve?

Participants may be asked to be in the study for approximately 100 days. This includes: -Screening Period of up to 60 days where tests will be done to check if the participants are eligible to take part in the study. Participants may have to visit the clinic approximately 3 times during the Screening Period.

Baseline Period of up to 3 days before the start of study wherein participants will be contacted over the phone to collect details about other medicines and changes to their health and life. MRI and TSPO PET scans will also be done at this time. The participants will have to report to a

dedicated external PET center for the scans.

Treatment Period of approximately 28 days where participants will have to report 5 times to the clinic and 1 time to a dedicated external PET centre for tests, assessments, and procedures in addition to taking the study medication twice a day.

Follow-up Period where participants will have a check-up approximately 14 days after the last study treatment administration.

Participants will be placed in one of the following treatment groups:

Group 1 will receive selnoflast, given as capsules for about 28 days.

Group 2 will receive a placebo, given as capsules for about 28 days.

What are the possible benefits and risks of participating?

Participants' health may or may not improve from participation in the clinical trial. Still, the information collected may help other people with similar medical conditions in the future. Participants may have side effects from the drugs or procedures used in this study that can be mild to severe or even life-threatening in nature, and they can vary from person to person. Participants will be closely monitored during the clinical trial; safety assessments will be performed regularly.

Where is the study run from? Roche (Switzerland)

When is the study starting and how long is it expected to run for? September 2021 to July 2024

Who is funding the study? Roche (Switzerland)

Who is the main contact? global-roche-genentech-trials@gene.com

Study website

https://forpatients.roche.com/en/trials/neurodegenerative-disorder/pd/a-study-to-investigate-the-safety--tolerability--pharma-25036.html

Contact information

Type(s) Public

Contact name Dr Clinical Trials

Contact details

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Additional identifiers

EudraCT/CTIS number 2023-504412-14-00

IRAS number 307220

ClinicalTrials.gov number NCT05924243

Secondary identifying numbers BP43176, CPMS 50823, IRAS 307220

Study information

Scientific Title

A phase 1b, adaptive, multi-center, randomized, double blind, placebo-controlled, parallel design study to investigate the safety, tolerability, pharmacokinetics, and pharmacodynamics of selnofast in participants with early idiopathic Parkinson's disease

Study objectives

Current study hypothesis as of 24/07/2023:

The aim of the study is to evaluate the safety, tolerability, pharmacokinetics, and pharmacodynamics of selnoflast in participants with early idiopathic Parkinson's disease (PD).

Previous study hypothesis:

The aim of the study is to evaluate the safety, tolerability, pharmacokinetics, and pharmacodynamics of RO7486967 in participants with early idiopathic Parkinson's disease (PD).

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 11/04/2021, WCG IRB (1019 39th Avenue, SE Suite 120 Puyallup, WA 98374, USA; +1 855-818-2289; clientservices@wcgirb.com), ref: 20215051

Study design

Phase 1b adaptive multicentre double-blind randomized placebo-controlled parallel design study

Primary study design Interventional

Secondary study design Randomised parallel trial **Study setting(s)** Other

Study type(s)

Treatment

Participant information sheet

Not available in web format, please use the contact details to request a patient information sheet.

Health condition(s) or problem(s) studied

Parkinson's disease

Interventions

Current interventions as of 24/07/2023:

Selnoflast: Participants will receive selnoflast capsules for 28 days. Placebo: Participants will receive a matching placebo to selnoflast capsules for 28 days. Randomisation is done using an Interactive Voice/Web Response System (IxRS)

Previous interventions:

RO7486967: Participants will receive RO7486967 capsules, 200 mg, orally, twice daily, for 28 days.

Placebo: Participants will receive a matching placebo to RO7486967 capsules, orally, twice daily, for 28 days.

Randomisation is done using an Interactive Voice/Web Response System (IxRS)

Intervention Type

Drug

Phase

Phase I

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

Primary outcome measure

1. Percentage of Participants with Adverse Events, Serious Adverse Events and Severity per National Cancer Institute-Common Terminology Criteria for Adverse Events Version 5.0 (NCI-CTCAE V5.0) from Screening up to Approximately 6 Weeks

2. Percentage of Participants with Abnormal Laboratory Findings in Blood and Urine from Screening up to Approximately 6 Weeks

3. Percentage of Participants with Abnormal Vital Signs and ECG Parameters Using Manual Techniques and Instrument Respectively from Screening up to Approximately 6 Weeks 4. Change from Baseline in Columbia Suicide Severity Rating Scale (C-SSRS) Using Interview-Based Instrument from Screening up to Approximately 6 Weeks

Secondary outcome measures

Current secondary outcome measures as of 24/07/2023:

1. Time to Maximum Concentration of Selnoflast using Blood Samples on Days 1, 15 and 28

2. Area Under the Curve (AUC) of Selnoflast using Blood samples on Days 1, 15 and 28

3. Maximum Concentration (Cmax) of Selnoflast using Blood Samples on Days 1, 15 and 28

4. Change from Baseline in Parametric Bindings of [18F]-DPA-714 in Different Brain Areas Using TSPO positron emission tomography [PET] Imaging from Baseline to Day 25

Previous secondary outcome measures:

1. Serum Concentration of RO7486967 Using Blood and Cerebrospinal Fluid (CSF) Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

2. Area Under the Curve 0-6 hr [AUC(0-6h)] of RO7486967 Using Blood and CSF Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

3. AUC (12h) of RO7486967 Using Blood and CSF Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

4. Maximum Concentration (Cmax) of RO7486967 Using Blood and CSF Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

5. Time to Achieve Maximum Concentration (Tmax) of RO7486967 Using Blood and CSF Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

6. Terminal Half-Life (t1/2) of RO7486967 Using Blood and CSF Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

7. Total Clearance (CL/F) of RO7486967 Using Blood and CSF Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

8. Volume of Distribution at Steady-State (Vss/F) of RO7486967 Using Blood and CSF Samples at Predose, 0.5 h, 1 h, 2 h, 4 h, 6 h on Days 1, 15 and 28

9. Change from Baseline in Parametric Bindings of [18F]-DPA-714 in Different Brain Areas Using TSPO positron emission tomography [PET] Imaging at Day 25

Overall study start date

11/04/2021

Completion date 18/07/2024

Eligibility

Key inclusion criteria

Current inclusion criteria as of 24/07/2023:

1. Male or post-menopausal female

2. Diagnosis of clinically probable idiopathic PD based on movement disorder society (MDS) criteria with bradykinesia plus one of the other cardinal signs of PD (resting tremor, rigidity)

3. A time from diagnosis of PD of at least 3 to maximum 60 months (5 years) at screening

- 4. Modified Hoehn and Yahr (H&Y) Stage ≤2.5 (in ON state)
- 5. Dopaminergic imaging consistent with dopamine transporter deficit
- 6. "High-affinity binder" or "mixed-affinity binder" for TSPO

7. Either treatment naïve or treatment with symptomatic PD therapy (levodopa and/or pramipexole, ropinirole, rotigotine) given for at least 90 days, with stable doses for at least 30

days prior to the first dose

8. No anticipated changes in PD therapy throughout the study duration

9. SARS-CoV-2 vaccination completed at least 60 days prior to the first dose.

Previous inclusion criteria:

1. Males and post-menopausal females aged 50-85 years at the time of signing Informed Consent Form (ICF)

2. Diagnosis of clinically probable idiopathic PD based on Movement Disorder Society (MDS) criteria with bradykinesia plus one of the other cardinal signs of PD (resting tremor, rigidity), at least 3 to maximum 36 months prior to screening

3. No motor complications, assessed by a score of 0 on the Movement Disorder Society-Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part IV at screening (for participants on levodopa treatment)

4. Modified Hoehn and Yahr (H&Y) Stage ≤2.5 (for participants on levodopa treatment in ON state)

5. Dopaminergic imaging is consistent with dopamine transporter deficit. A previously performed dopaminergic imaging scan (e.g., DAT-SPECT or FDOPA-PET) is also accepted if it was indicative of a dopaminergic deficit typical of Parkinson's disease

6. "High-affinity binder" or "mixed-affinity binder" for TSPO, as confirmed by prospective genotyping of TSPO polymorphism during screening

7. Able to swallow capsules whole

8. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) vaccination completed at least 60 days prior to the first dose. Individual vaccination complete status to be defined as per local regulations at the time of screening

9. Agree to reduce the use of tobacco and alcohol products to a minimum throughout the study and to refrain from using tobacco or alcohol during study visits

10. Body weight ranging from 45-110 kg (99-242 lbs.) and a body mass index (BMI) of 18-32 kg /m^2 inclusive

11. Prior or Concomitant therapy must be Either monotherapy treatment with levodopa of maximum 600 mg levodopa immediate release or 800 mg levodopa controlled or 1000 mg levodopa dual release, given for at least 90 days, with stable doses for at least 30 days prior to the first dose OR treatment naïve

Participant type(s)

Patient

Age group

Adult

Lower age limit 40 Years

Upper age limit 85 Years

Sex Both

Target number of participants

72

Total final enrolment

61

Key exclusion criteria

Current exclusion criteria as of 24/07/2023:

1. Medical history indicating a Parkinsonian syndrome other than idiopathic PD

2. CNS or psychiatric disorders other than idiopathic PD (mild depression or anxiety arising in the context of PD is not exclusionary)

3. History of brain surgery for PD

4. Use of any of symptomatic drug for PD other than levodopa pramipexole, ropinirole, or rotigotine within 60 days prior to the first dose

5. Known carriers for mutations in the following genes: alpha-synuclein, LRRK2, GBA, PRKN, PINK1, or DJ1

6. Unstable or clinically significant cardiovascular disease within the last year prior to screening 7. Uncontrolled hypertension

8. Use of oral anticoagulants, low-molecular-weight heparin, warfarin (Coumadin), acenocoumarol, and phenprocoumon is not allowed within 10 days before the first Lumbar Puncture and during the study (low dose aspirin is permitted as monotherapy)

9. Concomitant disease or unstable medical condition within 6 months of screening that could interfere with the study or treatment that might interfere with the conduct of the study, including but not limited to autoimmune disease, immunodeficiency diseases, any active infectious disease

10. History of immunodeficiency diseases

11. Presence of hepatitis B surface antigen (HBsAg) or positive for total hepatitis B core antibody (HBcAb), or positive hepatitis C (HCV) at screening

12. Vaccine(s) other than SARS-CoV2 vaccine within 28 days prior to the first dose, or plans to receive vaccines during the study or within 28 days of the last dose

13. History of chronic liver disease

14. Clinically significant abnormalities in laboratory test results at screening, including hepatic and renal panels, complete blood count, chemistry panel and urinalysis

15. Any previous administration of selnoflast or other compound targeting NLRP3

16. Enrollment in another investigational study

17. Use of any of other investigational therapy (other than protocol-mandated study treatment) within 90 days or 5 drug elimination half-lives (whichever is longer) prior to the first dose

Previous exclusion criteria:

1. Medical history indicating a Parkinsonian syndrome other than idiopathic PD, including but not limited to progressive supranuclear palsy, multiple system atrophy, drug induced Parkinsonism, essential tremor, vascular Parkinsonism, primary dystonia

2. History of brain surgery for PD

4. Diagnosis of dementia or another significant central nervous system (CNS) disease other than PD

^{3.} Known carriers for mutations in the following genes: α-synuclein, LRRK2, GBA, PRKN, PINK1, or DJ1

5. History of clinically significant abnormality in a Magnetic Resonance Imaging (MRI) scan, including but not limited to prior haemorrhage or infarct

6. Presence of any psychiatric condition (e.g., major depression, schizophrenia, delusion, delirium) at screening or baseline

7. Acute suicidality, as evidenced by answering "yes" for Question 3 or 4 on the C-SSRS scale 8. History of suicidal behaviour such that a determination of "yes" is made on the Suicidal Behaviour section of the C-SSRS for "Actual Attempt", "Interrupted Attempt", "Aborted Attempt", or "Preparatory Acts or Behaviour

9. History of malignancy prior to screening, except for appropriately treated, nonmelanoma skin carcinoma, non-metastatic prostate cancer, treated carcinoma in situ of the cervix or Stage I uterine cancer

10. Any surgical or medical condition which might significantly alter the absorption, distribution, metabolism, or excretion of drugs, or which may jeopardize the participant in case of participation in the study

11. History of major vascular surgery within 6 months prior to screening

12. History of clinically significant Electrocardiogram (ECG) abnormalities, or ECG abnormalities at screening or baseline (Day 1)

13. Within the last year prior to screening, unstable or clinically significant cardiovascular disease (e.g., myocardial infarction, major vascular surgery)

14. Uncontrolled hypertension

15. Recent (within the last 3 years prior to screening) and/or recurrent history of clinically significant autonomic dysfunction

16. History of clinically significant severe drug allergies, multiple drug allergies, or anaphylaxis due to gelatine (a constituent of the capsule shell)

Date of first enrolment

22/09/2022

Date of final enrolment

06/06/2024

Locations

Countries of recruitment England

Netherlands

United Kingdom

United States of America

Study participating centre UMC St Radboud Netherlands 6525 GA **Study participating centre Vanderbilt University Medical Center** United States of America 37232

Study participating centre University of Alabama at Birmingham United States of America 35294

Study participating centre Brain Research Center B.V Netherlands 1081 GN

Study participating centre Brain Research Center Zwolle Netherlands 8025AZ

Study participating centre Weill Cornell Medical College United States of America 10065

Study participating centre NeuroStudies.net, LLC United States of America 30033

Study participating centre University Pennsylvania Hospital United States of America 19104

Study participating centre

Georgetown University

United States of America 20007

Study participating centre Columbia University United States of America 10032-3725

Study participating centre Queen Mary University of London 327 Mile End Road London United Kingdom E1 4NS

Study participating centre Campus for Ageing & Vitality Newcastle General Hospital

Westgate Road Newcastle upon Tyne United Kingdom NE4 6BE

Study participating centre St George's University Hospitals NHS Foundation Trust St. Georges Hospital Cranmer Terrace London United Kingdom SW17 0RE

Study participating centre Charing Cross Hospital Fulham Palace Road London United Kingdom W6 8RF **Study participating centre National Hospital for Neurology & Neurosurgery** Queen Square London United Kingdom WC1N 3BG

Study participating centre University of Exeter Stocker Road Exeter United Kingdom EX4 4PY

Study participating centre Cedars Sinai Medical Center United States of America 90048

Sponsor information

Organisation Roche (Switzerland)

Sponsor details

Building 1 Grenzacherstrasse 124 Basel Switzerland CH-4070 +1 888-662-6728 global-roche-genentech-trials@gene.com

Sponsor type

Industry

Website http://www.roche.com/about_roche/roche_worldwide.htm

ROR https://ror.org/00by1q217

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

Publication and dissemination plan

Planned dissemination at the international congress (e.g. International Congress of Movement disorders) and publication in a high-impact peer-reviewed journal

Intention to publish date

31/05/2026

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