A phase 1 pharmacokinetic study to assess and compare the relative bioavailability of a capsule and a tablet formulation of YTX-7739 following single oral doses administered with and without food in Healthy Volunteers

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The primary objective of this study is to assess the pharmacokinetics and the effect of food on the pharmacokinetics of the YTX-7739 tablet formulation following single oral doses of 30 mg in HVs and to compare the relative bioavailability of the...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Movement disorders (incl parkinsonism)
Study type	Interventional

Summary

ID

NL-OMON50260

Source
ToetsingOnline

Brief title
YTX-7739 formulation study

Condition

- Movement disorders (incl parkinsonism)

Synonym
Parkinson's Disease

Research involving

Human

Sponsors and support

Primary sponsor: Yumanity Therapeutics
Source(s) of monetary or material Support: Pharmaceutical Industry

Intervention

Keyword: different formulations, Food effect, Parkinson's Disease, YTX-7739

Outcome measures

Primary outcome

* Relative bioavailability of Cmax and AUC0-120h of 30 mg tablet vs capsule

* PK parameters of YTX-7739 as tablet formulation by non-compartmental analysis

of the plasma concentration-time data:

o AUC0-120h, AUClast, AUC extrapolated, CL/F, Cmax, T1/2, Tlag, Tmax, Vz/F

* Change in PK parameters of YTX-7739 as tablet formulation after

administration after a high-fat breakfast by non-compartmental analysis of the

plasma concentration-time data:

o AUC120h, AUClas, AUC extrapolated, CL/F, Cmax, T1/2, Tlag, Tmax, Vz/F

Secondary outcome

* Treatment-emergent (serious) adverse events ((S)AEs) throughout the study at

every study visit

* Concomitant medication throughout the study at every study visit

* Vital signs (Pulse Rate (bpm), Systolic blood pressure (mmHg), Diastolic

blood pressure (mmHg)) as per assessment schedule

* Clinical laboratory tests (Hematology, blood chemistry and urinalysis) as per

assessment schedule

* ECG parameters (Heart Rate (HR) (bpm), PR, QRS, QT, QTcB, QTcF) as per assessment schedule

* AUC0-inf as tablet and capsule formulation, and change in AUC0-inf after a high-fat breakfast, by non-compartmental analysis on the plasma concentration-time data.

Study description

Background summary

A phase 1 study to compare the relative bioavailability of a single dose capsule and tablet formulation of YTX-7739 in healthy volunteers.

YTX-7739 is an oral SCD inhibitor. Through the inhibition of SCD, YTX-7739 decreases monounsaturated fatty acids, thereby reducing aSyn synthesis. This inhibits the progression of Parkinson's disease.
To date, YTX-7739 has been investigated in an SAD study, where single doses up to 400 mg were safe and tolerable in healthy volunteers. Currently, YTX-7739 is being investigated in an MAD study in healthy volunteers and patients with Parkinson's disease.
The SAD study showed a non-linear relationship between dose and AUC and a food effect of the capsule.
Therefore a tablet version with improved pharmacokinetic properties has been developed and will be compared to a capsule.
Also the food effect of the tablet will be investigated.

Study objective

The primary objective of this study is to assess the pharmacokinetics and the effect of food on the pharmacokinetics of the YTX-7739 tablet formulation following single oral doses of 30 mg in HVs and to compare the relative bioavailability of the tablet formulation to the YTX-7739 capsule formulation.
The secondary objective is to determine the tolerability following single oral doses of 30 mg of the tablet formulation in HVs.

Study design

This study will be an open label study, consisting of 3 treatment periods with 3 weeks of washout in between.

Intervention

Treatment period 1: 30 mg YTX-7739 tablet formulation (2 tablets of 15mg).
Treatment period 2: 30 mg YTX-7739 capsule formulation (2 capsules, 1x25mg, 1x5 mg)
Treatment period 3: 30 mg YTX-7739 tablet formulation (2 tablets of 15mg), after high-fat breakfast

Study burden and risks

YTX-7739 has been studied up to 400 mg in single dose in a previous SAD study and was considered safe and well tolerated.
In this study, a dose of 30 mg will be administered, which is 13 times lower.
Subjects will receive the IMP at the CRO for 48 hours of continuous monitoring after each single dose. In addition, frequent safety assessment will be conducted during the study.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)

Inclusion criteria

1. Healthy adult male or female subjects 18-55 years of age, inclusive; defined as absence of evidence of any active acute or chronic disease or illness following a detailed medical and surgical history, a complete physical examination including vital signs, 12-lead ECG, haematology, blood chemistry and urinalysis;
2. Body mass index (BMI) between 18-30 kg/m2, inclusive, and with a minimum weight of 50kg and maximum weight of 100kg.

Exclusion criteria

1. Clinically significant findings as determined by medical history taking, physical examination, ECG, laboratory findings (including lipid or hormone profiles) and vital signs, as judged by the investigator.
3. Subjects with a QTcF of > 450 ms for males and > 470 ms for females at screening or a history of long QT syndrome.
8. Being on a diet composed of relevantly altered amounts of fat, protein or carbohydrates that may affect triglyceride and fatty acid levels (such as high-fat, gluten-free, carbohydrate-free, protein rich diets).
10. Gastrointestinal disease (such as irritable bowel syndrome, inflammatory bowel disease, chronic gastritis, peptic ulcer disease, etc.) that could affect absorption of the study drug.
11 History of gastric surgery, including Roux-en-Y gastric bypass surgery, an antrectomy with vagotomy, or gastrectomy.

Study design

Design

Study type: Interventional

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Treatment

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	11-01-2022
Enrollment:	16
Type:	Actual

Medical products/devices used

Product type:	Medicine
Brand name:	YTX-7739
Generic name:	N.A.

Ethics review

Approved WMO Date:	13-12-2021
Application type:	First submission
Review commission:	BEBO: Stichting Beoordeling Ethiek Bio-Medisch Onderzoek (Assen)
Approved WMO Date:	23-12-2021
Application type:	First submission
Review commission:	BEBO: Stichting Beoordeling Ethiek Bio-Medisch Onderzoek (Assen)
Approved WMO Date:	09-03-2022
Application type:	Amendment
Review commission:	BEBO: Stichting Beoordeling Ethiek Bio-Medisch Onderzoek (Assen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
EudraCT	EUCTR2021-004754-28-NL
CCMO	NL78956.056.21