An open-label, single-dose study to assess the relative bioavailability of 2 new formulations of UCB5857 versus the reference formulation, and to evaluate the mass balance recovery and the absolute bioavailability of UCB5857 using intravenous and oral microtracers in healthy subjects

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Autoimmune disorders
Study type	Interventional

Summary

ID

NL-OMON41752

Source
ToetsingOnline

Brief title
UCB5857 mass balance and absolute bioavailability study

Condition

- Autoimmune disorders

Synonym
rheumatoid arthritis, Sjögren□s syndrome

Research involving
Human

Sponsors and support

Primary sponsor: UCB Celltech
Source(s) of monetary or material Support: Farmaceutische industrie

Intervention

Keyword: autoimmune diseases, UCB5857

Outcome measures

Primary outcome

To determine the relative bioavailability of 2 new formulations of UCB5857

administered orally versus the existing (reference) formulation

administered orally.

Secondary outcome

- To evaluate the absolute bioavailability of UCB5857 when administered

intravenously as a 14C-labeled MT together with an oral administration

- To evaluate the mass balance recovery of UCB5857 when administered orally as

a 14C-labeled MT together with an oral administration

- To identify the metabolite profile (ie, quantitation and structure

elucidation) of UCB5857 in plasma, urine, and feces

- To evaluate the safety and tolerability of UCB5857

Study description

Background summary

UCB5857 is a new investigational compound that may eventually be used for the treatment of autoimmune diseases. Autoimmune diseases arise from an abnormal immune response of the body against substances and tissues normally present in the body. Examples of autoimmune diseases are rheumatoid arthritis and Sjögren*s syndrome. UCB5857 inhibits the action of a specific protein, phosphoinositide 3 kinase-delta, found in white blood cells. White blood cells play an important role in the immune system (body defense system). Due to its working mechanism, UCB5857 may reduce inflammatory reactions by inhibiting the action of phosphoinositide 3 kinase-delta in white blood cells.

Study objective

The Purpose of the study is to determine how quickly and to what extent two new formulations of UCB5857 (formulation A and B, administered by mouth) are absorbed and distributed into the body and how fast these are metabolized (broken down) and eliminated from the body compared to a previously studied formulation of UCB5857 (reference formulation).

The compound to be administered will be labeled with a low dose of 14 Carbon (14C) and is thus radioactive (also called radiolabeled). This enables the investigator to trace the compound in blood, urine, and feces. The safety and tolerability of UCB5857 will be also assessed throughout the study.

Study design

The actual study will consist of 3 treatment periods.

If the volunteer participate in Period 1a, he/she will stay in the clinical research center in Zuidlaren for 3 periods. In Period 1a, the volunteer will stay in the clinical research center for 6 days (5 nights). In Periods 2 and 3 you will stay in the clinical research center for 5 days (4 nights). The time interval between each period is 2 days.

If the volunteer participate in Period 1b, he/she will stay in the clinical research center in Zuidlaren for 2 periods. For Period 1b and Period 2 the volunteer will stay in the clinical research center for 1 interconnected period of 13 days (12 nights); Period 2 will start immediately after completion of Period 1. For Period 3 the volunteer will stay in the clinical research center for 5 days (4 nights).
The time interval between Period 1b/2 and Period 3 is 2 days.

Participants in Period 1a will receive UCB5857 in the form of a capsule, followed by administration of the radiolabeled study compound (14C UCB5857) via an intravenous injection 4 hours after intake of the capsule. The duration of the intravenous injection will be approximately 1 minute.

Participants in Period 1b will receive UCB5857 together with the radiolabeled study compound (14C UCB5857) in the form of a capsule.

In Period 2 and 3, the volunteer will receive UCB5857 in the form of a capsule.

Intervention

The study will consist of 3 treatment periods during which you will receive UCB5857 in different formulations.

In Period 1 participants will be divided into Period 1a (6 participants) or Period 1b (6 participants).
* Period 1a will consist of 6 days (Day -1 to Day 5). On Day 1 of Period 1a, 6 participants will receive a single dose of 30 milligram UCB5857 in the form of a capsule. Four hours after intake of the capsule you will receive a single dose of 20 microgram radiolabeled study compound (14C UCB5857) in the form an injection into a vein in your arm (intravenous injection).
* Period 1b will consist of 9 days (Day -1 to Day 8). On Day 1 of Period 1b, 6 participants will receive a single dose of 30 milligram UCB5857 together with 20 microgram radiolabeled study compound (14C UCB5857) in the form of a capsule.

Periods 2 and 3 each consist of 5 days (Day -1 to Day 4). On Day 1 of each period all 12 participants will receive a single dose of 30 milligram UCB5857 (either formulation A or B) in the form of a capsule. In which sequence the volunteer will receive these 2 formulations (A-B or B-A) will be determined by chance.

Study burden and risks

All potential drugs cause adverse events; the extent to which this occurs differs. In this study the volunteer will receive 30 mg UCB5857 in 3 different formulations (formulation A, B, and the previously studied [reference] formulation). In a previous study in healthy volunteers, who received the reference formulation of UCB5857, no adverse effects were observed following administration of single and multiple doses of UCB5857 at a dose level of 30 mg. Following single and multiple dose administration of UCB5857 at higher dose levels (i.e., 60 mg and 90 mg) the most frequently observed adverse effects were skin rash and gastrointestinal problems (abdominal discomfort, diarrhea, nausea, vomiting), which were considered to be possibly related to the study drug. Other adverse effects observed after intake of UCB5857 or placebo were: headache, taste alteration (metallic taste), dizziness, sore throat, nasal congestion, and tooth pain. All adverse effects observed were transient and of mild or moderate intensity, except for 1 severe event of skin rash in 1 volunteer who had received a single dose of 90 mg UCB5857. The skin rash observed in this volunteer was transient and had resolved at the end of the

study .

The adverse effects that may occur following intake of the new formulations A and B are expected to be similar to the adverse effects observed after intake of the reference formulation. However, you should be aware that the aforementioned adverse effects and possibly other, still unknown adverse effects, may occur during the study. With the dose used in this study (a single dose of 30 mg) no serious adverse effects are expected.

In this study radiolabeled UCB5857 will be used in Period 1a and 1b. The amount of radioactivity in this dose will be 74 kBq (kBq = kiloBecquerel, this is a unit to express the amount of radioactivity in the study drug). The average environmental background radiation burden in The Netherlands is approximately 2 mSv per year (mSv = miliSievert, this unit indicates the burden on the human body thus the effect on the human body of the amount of radioactivity administered). The additional radiation burden in this study due to the administration of 74 KBq 14C-labeled UCB5857 is calculated to be negligible (that is, less than the natural background radiation in 1 month).

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

healthy subjects
18 - 55 yrs, inclusive
BMI : 18.0 - 30.0 kg/m2, inclusive

Exclusion criteria

Suffering from hepatitis B, hepatitis C, cancer or HIV/AIDS. In case of participation in another drug study within 90 days before the start of this study or being a blood donor within 60 days from the start of the study. In case of donating more than 1.5 liters of blood in the 10 months prior the start of this study.

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):	04-03-2015
Enrollment:	12
Type:	Actual

Ethics review

Approved WMO Date:	24-02-2015
Application type:	First submission
Review commission:	BEBO: Stichting Beoordeling Ethiek Bio-Medisch Onderzoek (Assen)
Approved WMO Date:	26-02-2015
Application type:	First submission
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	EUCTR2014-005353-39-NL
CCMO	NL52425.056.15