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A study to compare a single dose of M923, EU-sourced Humira or US-sourced Humira in healthy volunteers

Submission date	Recruitment status	[ ] Prospectively registered
11/02/2015	No longer recruiting	[ ] Protocol
Registration date	**Overall study status**	[ ] Statistical analysis plan
16/02/2015	Completed	[ ] Results
Last Edited	**Condition category**	[ ] Individual participant data
02/09/2020	Other	[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
This is a study to investigate and compare the pharmacokinetics (measuring drug levels in the blood over time), safety, tolerability and immunogenicity (blood tests to check the body's immune response to the drug) following single doses (40mg) of three different preparations of a human monoclonal antibody given by injection. This anti-inflammatory human monoclonal antibody is used to treat various autoimmune diseases such as rheumatoid arthritis and psoriasis. Two different preparations are marketed for use in the USA (USHumira) and Europe (EUHumira). Baxter Innovations GmbH (part of The Baxter Healthcare Corporation) is developing a monoclonal antibody M923 to be a similar biological medicinal product (biosimilar) to the marketed adalimumab (USHumira and EUHumira) preparations. M923 has not been given to humans before and in this study will be compared with the 2 marketed USHumira and EUHumira preparations.

Who can participate?
Healthy adults aged 18-55

What does the study involve?
After an initial review of their medical condition to ensure that they meet study requirements to take part, the participants are randomly allocated into one of two groups. Those in group 1 are given a single dose of M923. Those in group 2 are given a single dose of USHumira. Those in group 3 are given a single dose of EUHumira. The study takes place over about 9 months and involves a screening visit, a period where volunteers will be inpatients and must stay in the clinic (up to eight nights), several outpatient visits and a final follow up visit.

What are the possible benefits and risks of participating?
There is no medical benefit to the subjects as they are healthy volunteers. The possibility of side effects from the preparations of Humira and M923 is minimal not only due to the single dose used but also because previous studies with Adalimumab (Humira®) in healthy subjects demonstrated no treatment related serious side effects.

Where is the study run from?
It is a multisite study with three sites in London, Wales, and Northern Ireland

When is the study starting and how long is it expected to run for?
December 2014 to August 2015

Who is funding the study?
Baxter Innovations GmbH (Austria)

Who is the main contact?
Dr Barbara Valenta Singer
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Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number
2014-001043-20

IRAS number
164168

ClinicalTrials.gov number

Secondary identifying numbers
911301, IRAS 164168

Study information

Scientific Title
A randomized, double-blind, three-arm, parallel group, single-dose study to compare the pharmacokinetics, safety, tolerability, and immunogenicity of three formulations of adalimumab (M923, US Sourced Humira and EU Sourced Humira) in healthy subjects

Study objectives
1. The primary objective is to investigate and compare the pharmacokinetic (PK) profiles of M923, United States of America (US) sourced Humira and European Union (EU) sourced Humira in healthy subjects.
2. The secondary objective is to investigate the safety, tolerability, and immunogenicity of M923, US sourced Humira and EU sourced Humira in healthy subjects.

Ethics approval required
Old ethics approval format

Ethics approval(s)
NRES Committee London - London Bridge, 11/12/2014, ref: 14/LO/2007

Study design
Multi-centre randomised double-blind three-arm parallel-group single-dose study

Primary study design
Interventional

Secondary study design
Randomised parallel trial

Study setting(s)
Other

Study type(s)
Other

Participant information sheet
Not available in web format please use contact details to request a subject information sheet.

Health condition(s) or problem(s) studied
Healthy adult volunteers

Interventions
Three formulations of adalimumab (M923, US Sourced Humira and EU Sourced Humira)

Intervention Type
Drug

Phase
Phase I

Drug/device/biological/vaccine name(s)
M923 (adalimumab), US sourced Humira (adalimumab) and EU sourced Humira (adalimumab)

Primary outcome measure
1. Observed maximum concentration (Cmax)
2. Area under the serum concentration-time curve from time zero to 336 hours [AUC(0-336)]
3. Area under the serum concentration-time curve from time zero extrapolated to infinity [AUC

(0-inf)]
PK blood samples will be taken pre-dose and up to and including Day 71 post-dose.

Secondary outcome measures
1. The area under the serum concentration-time curve from time zero to 1344 hours [AUC(0-1344)]
2. Area under the serum concentration-time curve from time zero to time of the last quantifiable concentration [AUC(0-last)]
3. Time of maximum concentration (tmax)
4. Terminal rate constant (λz)
5. Terminal half- life (t1/2)
6. Apparent volume of distribution following extravascular dosing (Vz/F)
7. Apparent volume of distribution at distribution equilibrium (Vss/F)
8. Apparent systemic clearance after extravascular dosing (CL/F)
9. Area under the concentration-time curve extrapolated from time t to infinity as a percentage of total AUC (%AUCex)

Vital signs will be performed pre-dose and post-dose - ECGs will be performed pre-dose and post-dose. Clinical laboratory tests: pre-dose and post-dose. Adverse events: Day-1 till last visit. Injection site evaluation Day-1 till last visit

Overall study start date
11/12/2014

Completion date
26/08/2015

Eligibility

Key inclusion criteria
1. Male or females of non-childbearing potential aged 18 to 55 years, inclusive
2. Healthy as determined by pre study medical history, physical examination, vital signs and 12-lead ECG
3. Clinical laboratory test results that are not clinically significant and are acceptable to the investigator at screening and admission to the clinical unit (Day -1)
4. Body weight between 60.0 and 100.0 kg and a body mass index (BMI) between 18.5 and 29.9 kg/m2, inclusive
5. Male subjects must have been vasectomized with confirmation of sterility or be willing to comply with the contraception restrictions for this study
6. Female subjects must have a negative pregnancy test at screening and on admission to the clinical unit (Day -1), must not be lactating, and must be of non-childbearing potential
7. Has smoked ≤10 cigarettes or 3 cigars or 3 pipes/day for at least 3 months prior to screening and is willing to comply with smoking restrictions during confinement at the study center
8. Willing and able to comply with the requirements of the study
9. Willing and able to sign a written informed consent

Participant type(s)
Healthy volunteer

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
324

Total final enrolment
324

Key exclusion criteria
1. Clinically significant allergic or hypersensitivity conditions
2. Tuberculosis, invasive systemic fungal infections, other severe opportunistic infections, recent serious infection, recent or recurrent herpes zoster infection, chronic or recurrent infections
3. Recent or planned other investigational trial participation
4. Alcohol abuse or drug abuse
5. Recent use of any prescribed or non prescribed medication other than paracetamol, vitamins and for females, hormone replacement therapy
6. Congestive heart failure
7. Signs or symptoms of demyelinating disease
8. Cancer
9. Impaired liver function
10. Immunodeficiency or other clinically significant immunological disorders
11. Anti-citrullinated protein antibodies at screening
12. Anti-drug antibodies to adalimumab at screening
13. Clinically relevant history or presence of medical disorders as judged by the investigator
14. Recent or planned receipt during the study of a live vaccine
15. Medical dietary restrictions
16. Subjects who cannot communicate reliably

Date of first enrolment
11/12/2014

Date of final enrolment
30/04/2015

Locations

Countries of recruitment
England

Northern Ireland

United Kingdom

Wales

Study participating centre
Quintiles Drug Research Unit at Guy's Hospital
6 Newcomen Street
London
United Kingdom
SE11YR

Study participating centre
Simbec Research Limited
Pentrebach
Merthyr Tydfil
United Kingdom
CF48 4DR

Study participating centre
Biokinetic Europe
14 Great Victoria Street
Belfast
United Kingdom
BT2 7B

Sponsor information

Organisation
Baxter Innovations GmbH

Sponsor details
Donau-City-Strasse 7
Vienna
Austria
1220

Sponsor type
Industry

ROR
https://ror.org/013xmn143

Funder(s)

Funder type

Industry

Funder Name
Baxter Innovations

Alternative Name(s)

Funding Body Type
Private sector organisation

Funding Body Subtype
For-profit companies (industry)

Location
Austria

Results and Publications

Publication and dissemination plan
To be confirmed at a later date

2016 abstract in https://ard.bmj.com/content/75/Suppl_2/495.3 (added 02/09/2020)

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No