Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

In- Vivo Bioequivalence study of Empagliflozin/Linagliptin/Metformin 25/5/1000 & 12.5/2.5/1000 mg FC. (GLOTRIO® ER. 25/5/1000 & 12.5/2.5/1000 mg FC.Tab Abidi Pharma, Iran) with brand drugs (TRIJARDY® XL 25/5/1000 & 12.5/2.5/1000 mg FC. Tab, Boehringer Ingelheim , Germany) in Iranian healthy volunteers.

Protocol summary

Study aim

In- Vivo Bioequivalence study of Empagliflozin/Linagliptin/Metformin 25/5/1000 & 12.5/2.5/1000 mg FC. (GLOTRIO® ER. 25/5/1000 & 12.5/2.5/1000 mg FC.Tab Abidi Pharma, Iran) with brand drugs (TRIJARDY® XL 25/5/1000 & 12.5/2.5/1000 mg FC. Tab, Boehringer Ingelheim , Germany) in Iranian healthy volunteers.

Design

In-vivo bioequivalence study of Empagliflozin/Linagliptin/Metformin 25/5/1000 & 12.5/2.5/1000 mg Abidi Pharma in comparison with reference drug (TRIJARDY® XL 25/5/1000 & 12.5/2.5/1000 mg FC. Tab, Boehringer Ingelheim , German). The single blind, Cross-over, two period, two groups (Intervention and control) and randomized (paper lottery randomization method) study with one week wash-out time.

Settings and conduct

This study is carried out in Simin Baspar Tayf-Gostar Company, Tabriz, Iran. The study population is 24 healthy Iranian volunteers.This study is a single blind study and by taking out the drugs from the existing packaging, the volunteers will not know the time of receiving the test drug and the brand. This study is a cross over study that is performed in two time periods of 72 hours with a two-week wash-out period.

Participants/Inclusion and exclusion criteria

Inclusion criteria: age between 18-55 years old; body mass index (BMI) in the range of 18-28. Exclusion criteria: history of heart, kidney and liver disease; pregnancy; drug addiction.

Intervention groups

Single dose: Empagliflozin/Linagliptin/Metformin 25/5/1000 & 12.5/2.5/1000 mg Abidi Pharma. Control group: Single dose TRIJARDY® XL 25/5/1000 & 12.5/2.5/1000 mg FC. Tab, Boehringer Ingelheim , German

Main outcome variables

Plasma drug concentration

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200105046010N65**
Registration date: **2022-08-26, 1401/06/04**
Registration timing: **registered_while_recruiting**

Last update: **2022-08-26, 1401/06/04**
Update count: **0**

Registration date

2022-08-26, 1401/06/04

Registrant information

Name

Javad Shokri

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 41 3661 4125

Email address

shokri.j@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date
2022-08-23, 1401/06/01
Expected recruitment end date
2023-04-21, 1402/02/01
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
In- Vivo Bioequivalence study of Empagliflozin/Linagliptin/Metformin 25/5/1000 & 12.5/2.5/1000 mg FC. (GLOTRIO® ER. 25/5/1000 & 12.5/2.5/1000 mg FC.Tab Abidi Pharma, Iran) with brand drugs (TRIJARDY® XL 25/5/1000 & 12.5/2.5/1000 mg FC. Tab, Boehringer Ingelheim , Germany) in Iranian healthy volunteers.

Public title
In-vivo Bioequivalence Test of GLOTRIO® ER. 25/5/1000 & 12.5/2.5/1000 mg FC tablet Abidi Pharma with brand drug (TRIJARDY® XL 25/5/1000 & 12.5/2.5/1000 mg FC. Tab, Boehringer Ingelheim , Germany)
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
General health Body mass index between18-28 Informed consent Being at the age of 18-55 years old
Exclusion criteria:
Smoking A history of cardiovascular disease A history of liver & kidney disease Pregnancy Alcohol & Drug addiction Hypersensitivity to the drug
Age
From **18 years** old to **55 years** old
Gender
Both

Phase
Bioequivalence
Groups that have been masked

- Participant

Sample size
Target sample size: **24**
Randomization (investigator's opinion)
Randomized
Randomization description
For this purpose, A 24- persons group will be selected and divided to two 12-persons groups randomly. The names of all volunteers will be written on paper pieces and wrapped in aluminum foils. The first 12 papers will randomly be withdrawn from bottle will be selected as group A and others will be categorized in group B.
Blinding (investigator's opinion)
Single blinded
Blinding description
Candidates are not aware of receiving the test drug or brand one. In a single study, information that could distort the test result is hidden from the candidates, but the person in charge of the test is aware of it. Test and Brand drugs are removed from their packaging by the executor and placed in similar and coded cans. Volunteers will not be informed about receiving the brand or test drug.
Placebo
Not used
Assignment
Crossover
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Tabriz University of Medical Sciences
Street address
Third floor; Central building; Tabriz University of Medical Sciences; Dneshgah St.
City
Tabriz
Province
East Azarbaijan
Postal code
5166614766
Approval date
2021-12-13, 1400/09/22
Ethics committee reference number
IR.TBZMED.REC.1400.922

Health conditions studied

1

Description of health condition studied
Bio equivalence test
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Plasma drug concentration
Timepoint
Sampling times in this study will be 0، 0.5، 1، 1.5، 2، 2.5، 3، 3.5، 4، 5، 6، 8, 10,12,24,48 hours after prescribing the tablet.
Method of measurement
High Performance Liquid Chromatography with tandem mass spectroscopy detector

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: One test tablet (GLOTRIO® ER. Empagliflozin/Linagliptin/Metformin 25/5/1000 & 12.5/2.5/1000 mg FC tablet Abidi Pharma) will be received. Blood samples will be taken for 48 hours at the mentioned times after drug administration and the concentration of the drug in Plasma samples will be measured by liquid chromatography with mass spectroscopy detector

Category
Treatment - Other

2

Description
Control group: One Reference tablet TRIJARDY® XL 25/5/1000 & 12.5/2.5/1000 mg FC. Tab, Boehringer Ingelheim , Germany will be received. Blood samples will be taken for 48 hours at the mentioned times after drug administration and the concentration of drug in plasma samples will be measured by liquid chromatography with mass spectroscopy detector.

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Simin Baspar Teyf Gostar Company

Full name of responsible person
Javad Shokri

Street address
No.48, Ferdos square

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Shokri.j@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Abidi Pharmaceutical Company

Full name of responsible person
Amir Razavian

Street address
No. 72, Abidi Boulevard, 8 km of Shahid Lashkari Highway, Tehran

City
Tehran

Province
Tehran

Postal code
7636313897

Phone
+98 21 4452 2451

Email
info@abidi-diabetes.com

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
Abidi Pharmaceutical Company

Proportion provided by this source
100

Public or private sector
Private

Domestic or foreign origin
Domestic

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
Persons

Person responsible for general inquiries

Contact

Name of organization / entity
Simin Baspar Teyf Gostar Company

Full name of responsible person
Dariush Omidfar

Position
Lab. Manager

Latest degree
Master

Other areas of specialty/work
Bioanalysis

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Person responsible for scientific inquiries

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Person responsible for updating data

Contact
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Official Manager
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Other areas of specialty/work
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
All information and data of the study will remain secured based on the agreement established between researcher and drug producer.
Study Protocol
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available