

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

26 May 2026

### A study to compare the relative bioavailability of Pars Behrouzan Jam and Mylan tablet formulations of doxycycline hyclate 100 mg in 24 healthy adult volunteers under fasting conditions

#### Protocol summary

##### Study aim

The study aims to evaluate the bioequivalence of Doxycycline hyclate 100 mg capsules produced by two different pharmaceutical companies under fasting conditions

##### Design

This randomized, single-dose, two-way, crossover study is conducted to compare the pharmacokinetics of Test and Brand doxycycline hyclate capsules in 24 healthy adult volunteers. Volunteers will be sorted and receive a number from 1 to 24. In the first phase of the study, 12 volunteers will receive doxycycline hyclate manufactured by Pars Behrouzan Jam and the remaining 12 volunteers will receive doxycycline hyclate produced by Mylan company. The administered drugs will be replaced to another group in the second phase of the study.

##### Settings and conduct

The dose administration and subsequent sample collection will be performed in Motahhari hospital (Gonbade Kavous, Iran).

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: aged 18-55 years; subject available for the entire study period; willingness to adhere to protocol requirements as evidenced by written informed consent; good health at screening. Exclusion criteria: History of use of any drug; hypersensitivity or intolerance; significant history or current evidence of chronic disease; receipt of any drug as part of a research study within 30 days prior to the present study.

##### Intervention groups

First intervention group: A single 100 mg oral dose of doxycycline hyclate (1 capsule) manufactured by Pars Behrouzan Jam company to 12 subjects. Second intervention group: A single 100 mg oral dose of doxycycline hyclate (1 capsule) manufactured by Mylan company to 12 subjects. Since in this study, the volunteers will receive both test and reference drugs,

each volunteer will act as his own control.

##### Main outcome variables

Drug plasma concentration; Area under the plasma concentration-time curve

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20130626013776N70**

Registration date: **2022-07-19, 1401/04/28**

Registration timing: **prospective**

Last update: **2022-07-19, 1401/04/28**

Update count: **0**

##### Registration date

2022-07-19, 1401/04/28

##### Registrant information

##### Name

Hossein Amini

##### Name of organization / entity

Golestan University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 17 1442 1651

##### Email address

hamini@sbmu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-10-23, 1401/08/01

##### Expected recruitment end date

2023-08-23, 1402/06/01

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

A study to compare the relative bioavailability of Pars Behrouzan Jam and Mylan tablet formulations of doxycycline hyclate 100 mg in 24 healthy adult volunteers under fasting conditions

**Public title**

Bioequivalence study of doxycycline hyclate 100 mg capsules

**Purpose**

Basic science

**Inclusion/Exclusion criteria****Inclusion criteria:**

18-55 years of age. The subject is able and willing to provide signed informed consent. The subject is available for the entire study period. Willing to adhere to protocol requirements as evidenced by written informed consent. The subject has a stable residence and telephone. Good health as determined by lack of clinically significant abnormalities in health assessments performed at screening.

**Exclusion criteria:**

History of allergy or sensitivity to doxycycline. History of any drug hypersensitivity or intolerance which, in the opinion of the investigator, would compromise the safety of the subject of the study. Significant history or current evidence of chronic infectious disease, system disorder or organ dysfunction. Presence of gastrointestinal disease or history of malabsorption within the last year. History of a medical disorders occurring within the last year that required hospitalization or medication. Use of pharmacologic agents known to significantly induce or inhibit drug-metabolizing enzymes within 30 days prior to dosing. Receipt of any drug as part of a research study within 30 days prior to the present study. Donation or significant loss of whole blood (480 ml or more) within 30 days prior to the present study.

**Age**

From **18 years** old to **55 years** old

**Gender**

Both

**Phase**

Bioequivalence

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **24**

More than 1 sample in each individual

Number of samples in each individual: **2**

In a crossover design, each person is its own control and receives two different interventions

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

A pot sampling method will be used in this study. 12

papers are labeled "Reference Product" and 12 papers are written as "Test Product". The papers are then placed in sealed envelopes, and participants randomly select a paper and will be placed in the Reference or Test groups.

**Blinding (investigator's opinion)**

Not blinded

**Blinding description****Placebo**

Not used

**Assignment**

Crossover

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics Committee of Golestan University of Medical Sciences

**Street address**

Falsafi Building, Sari Road Km 2

**City**

Gorgan

**Province**

Golestan

**Postal code**

4934174515

**Approval date**

2022-07-03, 1401/04/12

**Ethics committee reference number**

IR.GOUMS.REC.1401.136

**Health conditions studied****1****Description of health condition studied****ICD-10 code****ICD-10 code description****Primary outcomes****1****Description**

Drug plasma concentration

**Timepoint**

At time zero and 1, 1.5, 2, 2.5, 3, 4, 6, 8, 10, 24, 48 and 72 h after drug administration

**Method of measurement**

Blood sampling and measurement of drug concentrations by high-performance liquid chromatography

## Secondary outcomes

### 1

#### Description

Plasma half-life

#### Timepoint

From the terminal 60 hours of plasma concentration-time profile

#### Method of measurement

Blood sampling and drug analysis by high-performance liquid chromatography method

## Intervention groups

### 1

#### Description

Intervention group 1: Oral administration of a single 100 mg dose of doxycycline hyclate (1 capsule) manufactured by Pars Behrouzan Jam to healthy volunteers under fasting conditions in the morning of the experiment day

#### Category

Treatment - Drugs

### 2

#### Description

Intervention group 2: Oral administration of a single 100 mg dose of doxycycline hyclate (1 capsule) manufactured by Mylan to healthy volunteers under fasting conditions in the morning of the experiment day

#### Category

Treatment - Drugs

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Dialysis Center, S. Motahhari Hospital

##### Full name of responsible person

Yahya Naserifard

##### Street address

Taleghani Street

##### City

Gonbade Kavous

##### Province

Golestan

##### Postal code

4916817693

##### Phone

+98 17 3252 5972

##### Fax

+98 17 3252 5972

##### Email

haminhplc@yahoo.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Pars Behrouzan Jam Pharmaceuticals

##### Full name of responsible person

Maryam Tohidi

##### Street address

Third Floor, No. 315, Sindokht Crossroad, West Fatemei Street

##### City

Tehran

##### Province

Tehran

##### Postal code

1389114711

##### Phone

+98 21 6642 3315

##### Fax

+98 21 6642 3315

##### Email

info@pbjpharma.com

##### Web page address

http://pbjpharma.com

#### Grant name

Bioequivalence Study of Doxycycline

#### Grant code / Reference number

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

No

#### Title of funding source

Pars Behrouzan Jam Pharmaceuticals

#### 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

Industry

## Person responsible for general inquiries

#### Contact

##### Name of organization / entity

Gorgan University of Medical Sciences

##### Full name of responsible person

Hossein Amini

##### Position

Associate professor

##### Latest degree

Ph.D.

##### Other areas of specialty/work

Medical Pharmacy

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Sari Road, Km 2

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## Person responsible for scientific inquiries

### Contact

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**Position**  
Associate professor  
**Latest degree**  
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**Other areas of specialty/work**  
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## Person responsible for updating data

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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

Data are confidential and need permission from the company.

### 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

No - There is not a plan to make this available