

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects of daily consumption of barberry juice on the status of liver tests and markers of oxidative stress in healthy people

#### Protocol summary

##### Summary

This interventional, non-randomized research will study the effects of barberry syrup on antioxidant biomarkers, oxidative stress, and liver enzymes in the personnel of Birjand University of Medical Sciences. A total of 20 healthy, non-smokers and non-alcohol- abusers, irrespective of sex, aged between 20 and 40 years, who have not used antibiotics from two weeks to the study, will be incorporated informedly and voluntarily. Recruitment will occur in one center and there is no blinding. In case a participant uses antibiotics, smokes or consumes alcohol during the study, s/he will be excluded. Twenty-four hours before the intervention, blood samples will be collected before and after drinking barberry syrup at different times ( 1, 3, 6 and 8 hours later); urine samples will also be collected after 8, 12 and 24 hours of drinking the syrup. Then, in a two-week period, each of the participants will take a full glass (240 cc) of fresh barberry juice (equivalent to 1.74g/240 ml gallic acid and 0.745 g/240 ml berberine phenolic compounds). At the end of the first and second weeks of intervention, blood and urine samples will be collected again. Blood samples will be used to measure oxidative stress indices (Ferric Reducing Ability of Plasma (FRAP), Thiobarbituric acid reactive substances (TBARS), and liver function tests will include enzyme (ALT, AST, ALK) and bilirubin tests.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2016101517756N9**  
Registration date: **2016-10-31, 1395/08/10**  
Registration timing: **prospective**

Last update:

Update count: **0**

##### Registration date

2016-10-31, 1395/08/10

##### Registrant information

###### Name

Mohammad Bagher Roozgar

###### Name of organization / entity

Birjand University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 56 3239 5680

###### Email address

mbroozgar@bums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice-chancellery for Research, Birjand University of Medical Sciences

##### Expected recruitment start date

2016-11-21, 1395/09/01

##### Expected recruitment end date

2016-11-28, 1395/09/08

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effects of daily consumption of barberry juice on the status of liver tests and markers of oxidative stress in healthy people

##### Public title

Effects of barberry consumption on liver function and antioxidant capacity

##### Purpose

Treatment

## **Inclusion/Exclusion criteria**

Inclusion criteria: university employee, age between 20 and 40, lack of a specific disease or use of antibiotics since two weeks from the study onset, non-use of alcohol or smoking, provision of informed consent; Exclusion criteria: suffering from a disease during the study, consumption of antibiotics and/or alcohol, or smoking during the study

## **Age**

From **20 years** old to **40 years** old

## **Gender**

Both

## **Phase**

2-3

## **Groups that have been masked**

*No information*

## **Sample size**

Target sample size: **20**

## **Randomization (investigator's opinion)**

N/A

## **Randomization description**

## **Blinding (investigator's opinion)**

Not blinded

## **Blinding description**

## **Placebo**

Not used

## **Assignment**

Single

## **Other design features**

## **Secondary Ids**

empty

## **Ethics committees**

### **1**

#### **Ethics committee**

##### **Name of ethics committee**

Ethics committee of Birjand University of Medical Sciences

##### **Street address**

Vice-chancellery for Research, Birjand University of Medical Sciences, Ghaffari St.,

##### **City**

Birjand,

##### **Postal code**

##### **Approval date**

2016-04-27, 1395/02/08

##### **Ethics committee reference number**

ir.bums.1395.2

## **Health conditions studied**

### **1**

#### **Description of health condition studied**

liver disease

#### **ICD-10 code**

k71

## **ICD-10 code description**

Toxic liver disease

## **Primary outcomes**

### **1**

#### **Description**

Antioxidant level

#### **Timepoint**

Before, 7 days and 14 days after intervention

#### **Method of measurement**

Ferric Reducing Ability of Plasma (FRAP), Thiobarbituric acid reactive substances (TBARS)

### **2**

#### **Description**

liver enzymes

#### **Timepoint**

Before, 7 days and 14 days after intervention

#### **Method of measurement**

ALT, AST, ALK and bilirubin tests

## **Secondary outcomes**

empty

## **Intervention groups**

### **1**

#### **Description**

Intervention: A full glass of barberry syrup (240 cc, equivalent to 1.74g/240 ml gallic acid and 0.745 g/240 ml berberine phenolic compounds) used on a daily basis for 2 weeks

#### **Category**

Treatment - Drugs

## **Recruitment centers**

### **1**

#### **Recruitment center**

##### **Name of recruitment center**

Research Center of Birjand University of Medical Sciences

##### **Full name of responsible person**

Dr Asghar Zarban

##### **Street address**

Birjand University of Medical Sciences, Ghaffari St.,

##### **City**

Birjand,

## **Sponsors / Funding sources**

### **1**

#### **Sponsor**

##### **Name of organization / entity**

Vice Chancellery for Research of Birjand University of

Medical Sciences

**Full name of responsible person**

Dr Asghar Zarban

**Street address**

Vice Chancellery for Research, Birjand University of  
Medical Sciences, Ghaffari St.,

**City**

Birjand,

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Vice Chancellery for Research of Birjand University of  
Medical Sciences

**Proportion provided by this source**

100

**Public or private sector**

*empty*

**Domestic or foreign origin**

*empty*

**Category of foreign source of funding**

*empty*

**Country of origin**

**Type of organization providing the funding**

*empty*

## Person responsible for general inquiries

**Contact**

**Name of organization / entity**

Birjand University of Medical Sciences

**Full name of responsible person**

Mohadeseh Abolhasannezhad

**Position**

Master of Science in Food Science and Industries

**Other areas of specialty/work**

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## Person responsible for scientific inquiries

**Contact**

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Dr Asghar Zarban

**Position**

Associate Professor in Biochemistry

**Other areas of specialty/work**

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## Person responsible for updating data

**Contact**

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Birjand University of Medical Sciences

**Full name of responsible person**

Mohammad Bagher Roozgar

**Position**

PhD Candidate of Translation

**Other areas of specialty/work**

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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

*empty*

**Study Protocol**

*empty*

**Statistical Analysis Plan**

*empty*

**Informed Consent Form**

*empty*

**Clinical Study Report**

*empty*

**Analytic Code**

*empty*

**Data Dictionary**

*empty*