

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

01 Jun 2026

### Growing response to probiotic supplementation in pregnant women with intrauterine growth restriction

#### Protocol summary

##### Study aim

Growing response to probiotic supplementation in pregnant women at risk of intrauterine growth restriction

##### Design

Placebo-controlled clinical trial; with parallel groups; double-blinded; A randomized; design for 50 patients

##### Settings and conduct

Patient will be assigned into 2 groups with block randomization method. 25 patients will be treated by probiotic & aspirin and 25 patients will be received placebo & aspirin. Both groups will also request to fill in a questionnaire before start and after of treatment. Drugs are named to A and B and have been administered in the similar bottle. Before start of the study blood sample will be taken to relevant factors after that in double blind study one group will be received probiotic & aspirin and the other two placebo & aspirin since diagnosis of high uterine artery resistance till 28 weeks At the end of the study blood sample is taken.

##### Participants/Inclusion and exclusion criteria

Inclusion Criteria: 18 to 40 years old; Gravid one; Mean UAPI in the study > 2.35; gestational age of 11 to 13 weeks and six days . No history of specific disease  
Exclusion criteria: Liver and kidney disease; Thyroid disorders; complete bed rest; BMI> 30

##### Intervention groups

50 subjects with high uterine arteries resistance will be assigned into 2 groups with block randomization method, 25 patients will be treated by Probiotic and Aspirin and 25 patients will be received placebo & Aspirin

##### Main outcome variables

Estimate fetal weight, TAC, GPX, MDA, lipid profile (Total cholesterol, triglyceride), FBS, Insulin resistance, hs-CRP , NO

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20140525017827N13**  
Registration date: **2021-11-20, 1400/08/29**  
Registration timing: **prospective**

Last update: **2021-11-20, 1400/08/29**

Update count: **0**

##### Registration date

2021-11-20, 1400/08/29

##### Registrant information

##### Name

Nasrin Asadi

##### Name of organization / entity

Shiraz University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 71 1233 2365

##### Email address

asadin@sums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-11-22, 1400/09/01

##### Expected recruitment end date

2022-06-22, 1401/04/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Growing response to probiotic supplementation in pregnant women with intrauterine growth restriction

**Public title**

Probiotic supplementation in pregnant women with intrauterine growth restriction

**Purpose**

Prevention

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

Age 18 to 40 years Women's BMI should be in the range 19.5-29.9 Gravid 1 Mean UAPI in the study group > 2.53 Gestational age 11 to 13 weeks and six days uterine vascular resistance is high

**Exclusion criteria:**

Liver and kidney disease Thyroid disorders Complete bed rest

**Age**

From **18 years** old to **40 years** old

**Gender**

Female

**Phase**

3

**Groups that have been masked**

- Participant
- Care provider
- Investigator
- Outcome assessor
- Data analyser
- Data and Safety Monitoring Board

**Sample size**

Target sample size: **50**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

The treatment allocation list is already designed on Block Balanced Randomization Method by the computer software (<https://mahmoodsaghaei.tripod.com/Softwares/randalloc.html>). They are divided into two intervention or control groups by block sizes of 4 and 6 with an allocation ratio of 1:1. Any eligible patient will be given a 1 to 50 code after obtaining informed consent in order to visit the clinic and based on above block, they receive A or B drug. The drug distributor doesn't have a role in the treatment plan and data analysis. The patients, researcher, data analyzer are not aware of the type of treatment for each patient. Finally, the patients will be followed by their own codes

**Blinding (investigator's opinion)**

Double blinded

**Blinding description**

Probiotic and placebo have been administered in the similar bottles, so patients and researchers were unable to detect which one was Probiotic or placebo. Our nurse colleague in this study in hospital delivered formulations to the participants of the study according to the randomized block table. She was unaware of the content of the bottles. The researcher had no information about formulation used by each patient while visiting them. At the end of the study, the formulations were decoded and the patients assigned to each group were identified

**Placebo**

Used

**Assignment**

Parallel

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

empty

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

Ethics Committee of Shiraz University of Medical Sciences

**Street address**

Shiraz University of Medical Sciences - Zand St - Shiraz

**City**

Shiraz

**Province**

Fars

**Postal code**

34786-71946

**Approval date**

2019-05-19, 1398/02/29

**Ethics committee reference number**

IR.SUMS.REC.1398.507

**Health conditions studied****1****Description of health condition studied**

Intrauterine growth restriction

**ICD-10 code**

o36.5

**ICD-10 code description**

Intrauterine growth restriction

**Primary outcomes****1****Description**

Total plasma antioxidant capacity (TAC)

**Timepoint**

before starting medications and at 28 weeks

**Method of measurement**

Benzie and Strain methods by calorimetric method using Cusabio Biotech Co

**2****Description**

Plasma Glutathione (GPX) Activity

**Timepoint**

Before starting medications and at 28 weeks

**Method of measurement**

Beutler method using Cusabio Biotech Co

### 3

**Description**

Malondialdehyde (MDA)

**Timepoint**

Before starting medications and at 28 weeks

**Method of measurement**

TBARS method

## Secondary outcomes

### 1

**Description**

Lipid profiles of total cholesterol, HDL-C and triglyceride concentrations

**Timepoint**

Before starting medications and at 28 weeks

**Method of measurement**

Enzymatic method using Selectra II autoanalyzer

### 2

**Description**

Inflammatory markers A. Inflammatory factor hs-CRP

**Timepoint**

Before starting medications and at 28 weeks

**Method of measurement**

ELISA device (immunoassay method)

### 3

**Description**

Nitric Oxide Inflammatory Marker Nitric Oxide Amount

**Timepoint**

Before starting medications and at 28 weeks

**Method of measurement**

The grease reaction is measured

### 4

**Description**

Fasting blood sugar and insulin resistance

**Timepoint**

Before starting medications and at 28 weeks

**Method of measurement**

Glucose oxidase / peroxidase assay using commercially available kits

## Intervention groups

### 1

**Description**

Intervention group: 25 of participant were treated with probiotic supplements of probiotic bacteria in the present study, including: Lactobacillus acidophilus 2CFU, Bifidobacterium bifidum, Lactophilus casei and Lactobacillus fermentum, which is prepared from Tehran Zig Tak Gene Company, twice a day. Diagnosis up to 28 weeks of pregnancy and aspirine 160 mg before sleep

**Category**

Treatment - Drugs

### 2

**Description**

Control group: 25 patient will be received placebo made by the Faculty of Pharmacy of Shiraz university of medical sciences, twice per day and aspirine 160 mg before sleep

**Category**

Placebo

## Recruitment centers

### 1

**Recruitment center****Name of recruitment center**

Perinataology clinic

**Full name of responsible person**

Sedighe Youosefi

**Street address**

Zand St

**City**

Shiraz

**Province**

Fars

**Postal code**

34786-71946

**Phone**

+98 71 3647 9830

**Email**

sedighe59yoosefi@gmail.com

## Sponsors / Funding sources

### 1

**Sponsor****Name of organization / entity**

Shiraz University of Medical Sciences

**Full name of responsible person**

Abbas Rezaeian Zade

**Street address**

Building of Shiraz University of Medical Sciences,  
Zand Ave

**City**

Shiraz

**Province**

Fars

**Postal code**

34786-71946

**Phone**

+98 71 3235 7282

**Email**

rezaiana@sums.ac.ir

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Shiraz University of Medical Sciences

**Proportion provided by this source**

100

**Public or private sector**

Public

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding**

*empty*

**Country of origin**

**Type of organization providing the funding**

Academic

**Person responsible for general inquiries**

**Contact**

**Name of organization / entity**

Shiraz University of Medical Sciences

**Full name of responsible person**

Sedighe Youosefi

**Position**

Fellow ship perinataology

**Latest degree**

Subspecialist

**Other areas of specialty/work**

Gynecology and Obstetrics

**Street address**

Department of obstetrics and gynecology, Shahid Faghihi Hospital, Zand St, Shiraz, Iran

**City**

Shiraz

**Province**

Fars

**Postal code**

34786-71946

**Phone**

+98 71 3612 8258

**Email**

sedighe59yoosefi@gmail.com

**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

Shiraz University of Medical Sciences

**Full name of responsible person**

Nasrin asadi

**Position**

Associate professor

**Latest degree**

Subspecialist

**Other areas of specialty/work**

Gynecology and Obstetrics

**Street address**

Department of obstetrics and gynecology, Shahid Faghihi Hospital, Zand St, Shiraz, Iran

**City**

Shiraz

**Province**

Fars

**Postal code**

34786-71946

**Phone**

+98 71 3612 8258

**Email**

nasadi2012@yahoo.ca

**Person responsible for updating data**

**Contact**

**Name of organization / entity**

Shiraz University of Medical Sciences

**Full name of responsible person**

Nasrin asadi

**Position**

Associate professor

**Latest degree**

Subspecialist

**Other areas of specialty/work**

Gynecology and Obstetrics

**Street address**

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**Province**

Fars

**Postal code**

34786-71946

**Phone**

+98 71 3612 8258

**Email**

nasadi2012@yahoo.ca

**Sharing plan**

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

Yes - There is a plan to make this available

**Study Protocol**

Undecided - It is not yet known if there will be a plan to make this available

**Statistical Analysis Plan**

Undecided - It is not yet known if there will be a plan to make this available

**Informed Consent Form**

Undecided - It is not yet known if there will be a plan to make this available

**Clinical Study Report**

Undecided - It is not yet known if there will be a plan to make this available

**Analytic Code**

Undecided - It is not yet known if there will be a plan to make this available

**Data Dictionary**

Undecided - It is not yet known if there will be a plan to make this available

**Title and more details about the data/document**

Experimental results, ultrasound of patients in both groups, Statistical Results

**When the data will become available and for how long**

End of august 2022

**To whom data/document is available**

healthcare professional- academic members of universities

**Under which criteria data/document could be used**

An official request from the organization

**From where data/document is obtainable**

To researchers responsible for responding to this plan  
Address: Maternal- Fetal Medicine (Perinatology), Hafez  
Hospital, Chamran Ave., Shiraz, Iran Tel:  
+98-71-36128257,+98-36122285 Fax: 07136479830

postal code: 7193635899

**What processes are involved for a request to access data/document**

Request to Vice-Chancellor for Research and Technology  
Affairs, Written request Coordinated by the ethics  
committee 2 months

**Comments**