

## HUMANITAS UNIVERSITY

### Selection procedure for 1 Type B Research Fellowship in Life Sciences in compliance with art. 22 of Law 240/2010

Humanitas University invites applications for 1 position as Research Fellow in Life Sciences.

Research Program Title	<p><b>“MEFISTO - Scaffold meniscale funzionalizzato per la prevenzione dell'insorgenza dell'osteoartrosi di ginocchio dopo meniscectomia.”</b></p> <p><u>Courtesy translation</u>: MEFISTO - Meniscal functionalized scaffold to prevent knee osteoarthritis onset after meniscectomy.</p>
Tutor	Prof. Elizaveta KON
Scientific Area	05 - Biological Sciences 06 – Medical Sciences
Gross amount of the fellowship	28.000 Euro
Duration of the fellowship	12 months
Objectives of the research	<p>The aim of the MEFISTO project is to develop new solutions for the treatment of meniscus loss to prevent post-meniscectomy osteoarthritis of the knee.</p> <p>Two different reconstructive strategies will be developed within the project:</p> <p>a) a controlled biodegradable meniscal scaffold, to regenerate native meniscus;</p> <p>b) a non-biodegradable bioactive meniscal scaffold, which will act as a mechanical device with the ability to modulate the inflammation.</p> <p>The biodegradable scaffold will promote the revascularization of the peripheral area, leaving the internal area avascular, reflecting the native meniscal tissue, and with micro/nano-non-biodegradable device particles that will</p>

	<p>provide modulation of inflammation.</p> <p>The interventions developed in the MEFISTO project aim to reduce joint sacrificing procedures in patients undergoing meniscectomy, while reducing the social burden, the associated costs and high levels of morbidity resulting from osteoarthritis.</p>
Activities to be carried out	<p>The Research Fellow will focus her/his activity on the planning of the in vivo and ex vivo studies and she/he will contribute to the scientific publications regarding the main topics of the regenerative medicine, with special focus on the treatments of the meniscal regeneration.</p>

The work place is in Pieve Emanuele - Milano.

A brief description of the project, activities to be carried out, mandatory requirements to take part into the selection process, information on the application procedure and on the selection criteria are presented in the following.

**RESEARCH PROJECT:**

The aim of the MEFISTO project is to develop new solutions for the treatment of meniscus loss to prevent post-meniscectomy osteoarthritis of the knee.

Two different reconstructive strategies will be developed within the project:

- a) a controlled biodegradable meniscal scaffold, to regenerate native meniscus;
- b) a non-biodegradable bioactive meniscal scaffold, which will act as a mechanical device with the ability to modulate the inflammation.

The biodegradable scaffold will promote the revascularization of the peripheral area, leaving the internal area avascular, reflecting the native meniscal tissue, and with micro/nano-non-biodegradable device particles that will provide modulation of inflammation.

The interventions developed in the MEFISTO project aim to reduce joint sacrificing procedures in patients undergoing meniscectomy, while reducing the social burden, the associated costs and high levels of morbidity resulting from osteoarthritis.

**ACTIVITIES TO BE CARRIED OUT:**

Main activities to be carried out in the context of the research project are:

- planning of the in vivo and ex vivo studies;
- contributing to the scientific publications regarding the main topics of the regenerative medicine, with special focus on the treatments of the meniscal regeneration.

#### **MANDATORY REQUIREMENTS:**

In order to be considered for the post candidates must hold:

- a Master's Degree in Biological Sciences or Biotechnology or Medical Sciences or similar fields;
- a PhD

As well as a scientific and professional background appropriate for the development of the research activities described in the present notice.

#### **SELECTION PROCESS:**

Application for admissions must be submitted at the following link:

<https://pica.cineca.it/humanitas>

No hard copy of the application must be sent by post.

At first access, applicants need to register by clicking on "Register" and completing the requested data.

If applicants already have LOGINMIUR credentials, they do not need to register again. They must access with their LOGINMIUR username and password in the relevant field LOGINMIUR.

Applicants must enter all data necessary to produce the application and attach the required documents in PDF format.

#### **SELECTION CRITERIA:**

Selection criteria are predetermined by the Selection Committee. As part of the selection process, the Committee will evaluate the curriculum, titles and publications presented by the candidate and will consider, in particular:

- Previous documented experience as an investigator in the field of regenerative medicine;
- Knowledge of the English language.

**FURTHER INFORMATION:**

For more details on the selection process please refer to the **Rectorate Decree n. 021/2020** (<http://www.hunimed.eu/it/lavora-con-noi/>) or send an inquiry to [ufficiodocenti@hunimed.eu](mailto:ufficiodocenti@hunimed.eu) or telephone +39 02.8224.5642/5421.