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	"**Pathway di regolazione delle cellule mieloidi, infliammazione e cancro**." Courtesy translation: "Regulatory pathways of myeloid cells, inflammation and cancer".
Tutor	Prof. Stefano DUGA
Scientific Area	05 - Biological Sciences
Gross amount of the fellowship	23.000 Euro
Duration of the fellowship	12 months
Objectives of the research	The general objective of this research project is to study the molecular and cellular pathways linking inflammation and cancer. A major focus will be on tumor-associated macrophages (TAM) and on molecules associated with TAM (i.e. Migration-Stimulating Factor, MSF). MSF, a 70 kD protein which lacks most of mature fibronectin (FN), was originally discovered as the product of an alternative intronic polyadenylation of the FN transcript expressed in embryonal life and in some tumors. Afterwards it was found to be expressed in TAM and to have potent motogenic activity. Here we propose a comprehensive effort to dissect the molecular basis and function of MSF, a molecule at the interface between immunity, inflammation and cancer. Efforts will include: definition of the post-transcriptional regulation of MSF expression in both human and mouse cells; selective genetic manipulation of MSF in mice and search for phenotypes; cellular responses; receptor

	identification; role in immunity, tissue remodeling and cancer; potential significance as a biomarker and as a therapeutic target.
Activities to be carried out	The Research Fellow will have to deal mainly with the following activities: 1. Study the regulation of MSF expression in humans 2. Identify and characterize murine MSF transcripts and protein 3. Define the expression profile of MSF in humans and mice and correlate transcript modulation with protein expression 4. Perturb MSF expression by interfering with polyadenylation and splicing 5. Study the effect of MSF exposure on the transcriptome in different cell model systems 6. Cloning, overexpression and functional characterization of mouse MSF 7. Construct an msf-ko mouse model.

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:

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MANDATORY REQUIREMENTS:

In order to be considered for the post candidates must hold a PhD.

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:

- Knowledge of molecular and cellular biology techniques (nucleic acid extraction, molecular cloning, transfections in eukaryotic cells, PCR, RT-PCR, qPCR, digital PCR, Sanger sequencing);
- proven experience in the analysis of NGS data;
- working experience on RNA biology.

FURTHER INFORMATION:

For more details on the selection process please refer to the **Rectorate Decree n. 176/2020** (http://www.hunimed.eu/it/lavora-con-noi/) or send an inquiry to ufficiodocenti@hunimed.eu or telephone +39 02.8224.5642/5421.