



Courtesy translation of D.R. n. 059/2022

For more details on the selection process, please refer to the Italian version of

D.R. n. 059/2022 available at <http://www.hunimed.eu/it/lavora-con-noi/>

SELECTION PROCEDURE FOR A RESEARCH FELLOWSHIP IN COMPLIANCE WITH ART. 22 OF LAW 240/2010

Research Program Title	Regulatory pathways of myeloid cells, inflammation and cancer
Tutor	Prof.ssa Rosanna ASSELTA, dr.ssa Barbara BOTTAZZI
Scientific Area	05 – Biological Sciences
Gross amount of the fellowship	23.000 Euro
Duration of the fellowship	12 months with possibility to extend
Objectives of the research	'The general objective of this application is to continue previous studies conducted by the research group on molecular and cellular pathways linking inflammation and cancer. A major focus will be on a set of molecules discovered in the lab, as being associated with tumor-associated macrophages (TAM). Previous published and unpublished work has provided new, unexpected vistas on cancer-related inflammation, which will be pursued in the present proposal. In particular, we will study the ability of selected molecules to directly stimulate the invasion of tumor cells using in vitro and in vivo models of remodeling and / or invasion in the matrix; we will analyze the signaling processes activated by the molecule, and we will perform in vivo therapeutic targeting experiments in models of metastatic dissemination of tumor cells. The project is based on the use of advanced imaging techniques, such as 2P intravital microscopy and STED-based super-resolution microscopy.
Activities to be carried out	1. Study the post-transcriptional regulation of MSF expression in humans (including alternative splicing and circRNA characterization)

	<p>2. Perturb MSF expression by interfering with polyadenylation and splicing</p> <p>3. Study the effect of MSF exposure on the transcriptome in different cell model systems</p> <p>4. Construct an msf-ko mouse model.</p> <p>The candidate will perform, among others:</p> <ul style="list-style-type: none"> - transfection experiments - CRISPR/CAS9 experiments, ASO silencing - extraction of nucleic acids, PCR, RT-PCR, qPCR, dPCR - NGS experiments
Work place	PIEVE EMANUELE - Milan
Mandatory requirements	<p>In order to be considered for the post candidates must hold a MSc in Biotechnology, Biological Science or Medicine and Surgery or related disciplines; PhD or an equivalent university qualification awarded by a foreign university (usually referred as a Master's Degree); scientific and professional CV suitable to the carrying out of the research activities outlines above</p>
Selection process	<p>Application for admissions must be submitted at the following link:</p> <p style="text-align: center;">https://pica.cineca.it/humanitas</p> <p>No hard copy of the application must be sent by post.</p> <p>At first access, applicants need to register by clicking on "Register" and completing the requested data.</p> <p>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.</p> <p>Applicants must enter all data necessary to produce the application and attach the required documents in PDF format.</p>
Selection criteria	<p>Selection criteria are predetermined by the Selection Committee. As part of the selection process, the Committee</p>

	<p>will evaluate the curriculum, titles and publications presented by the candidate and will consider, in particular:</p> <ul style="list-style-type: none">- excellent knowledge in the field of molecular and cellular biology techniques (nucleic acid extraction, molecular cloning, transfections in eukaryotic cells, PCR, RT-PCR, qPCR, dPCR, Sanger sequencing);- experience in preclinical models in mice and aptitude to learn new models.- Proven experience in the analysis of NGS data and working experience on RNA biology constitute a desirable plus.- Fluent English (written and spoken) is required.
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FURTHER INFORMATION:

In the event of any conflict between Job Opening text and Italian D.R. text, the Italian version will prevail.

For more details on the selection process please refer to the **D.R. n. 059/2022** (<http://www.hunimed.eu/it/lavora-con-noi/>) or send an inquiry to ufficiodocenti@hunimed.eu or telephone +39 02.8224.5642/5421.