



Courtesy translation of D.R. n. 037/2024

For more details on the selection process, please refer to the Italian version of D.R. n. 037/2024 available at <http://www.hunimed.eu/it/lavora-con-noi/>

SELECTION PROCEDURE FOR RESEARCH FELLOWSHIP

Research Program Title	Single-cell dissection of the cellular ecosystem in hepatocellular carcinoma
Tutor	Prof. Luigi Maria TERRACCIANO, prof. Salvatore PISCUOGLIO
Scientific Area	05 – Biological Sciences
Gross amount of the fellowship	30.000 Euro
Duration of the fellowship	12 months
Objectives of the research	<p>We hypothesize that by combining the resolution of single cell RNA sequencing (scRNA-seq) in situ visualization and the power afforded by large cohorts of bulk RNA-sequencing of HCCs we will be able to better characterize HCC from both tumor-centric and tissue microenvironment (TME)-centric perspectives, and to identify somatic genetic alterations that may modulate the TME in HCC.</p> <p>The aims of this project are 1) to dissect the cellular composition of HCC, 2) to define transcriptional cell states of the tumor cells that are associated with distinct TME patterns in HCC and 3) to identify genetic features in HCC that may modulate TME heterogeneity and composition. For aim 1 we will use scRNA-seq and in situ visualization to determine the identity, abundance, cell type-specific gene signatures and spatial distribution of the various major and rare populations in HCC. To extend the findings by scRNA-seq to large HCC cohorts in aims 2 and 3, we will optimize and apply in silico virtual microdissection to define the molecular and cellular subclasses of HCC from both tumor-centric and TME-centric perspectives and to identify the genetic features that may modulate the TME.</p>

<p>Activities to be carried out</p>	<ul style="list-style-type: none"> • Development, optimization and application of state-of-the-art methods to generate and execute drug treatment in in vitro and ex vivo 3D models; • Molecular study of the mechanisms of response/resistance to anticancer drugs; • Interpretation of genomics data for putative candidate selection; • Identification and characterization of new oncogenic mechanisms.
<p>Work place</p>	<p>PIEVE EMANUELE - Milan</p>
<p>Mandatory requirements</p>	<ul style="list-style-type: none"> • PhD in genetics, Molecular or Cell biology • Adequate scientific and professional background to carry out the research activity described in this call.
<p>Selection process</p>	<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. 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.</p>
<p>Selection criteria</p>	<p>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:</p> <ul style="list-style-type: none"> • Organized and detail-oriented, able to maintain accurate documentation of experiments and sample information; • Collaborative, able to work effectively in a team; • Ability to interpret the data and to generate hypotheses;



	<ul style="list-style-type: none">• Experience with manuscript writing;• Experience with grant writing is a plus;• Ability to multi-task;• Fluency in English (at least B2) is a must.
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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. 037/2024** (<http://www.hunimed.eu/it/lavora-con-noi/>) or send an inquiry to ufficiodocenti@hunimed.eu or telephone +39 02.8224.5642/5421.