



Courtesy translation of D.R. n. 182/2023

For more details on the selection process, please refer to the Italian version of D.R. n. 182/2023 available at <http://www.hunimed.eu/it/lavora-con-noi/>

SELECTION PROCEDURE FOR RESEARCH FELLOWSHIPS

Research Program Title	A novel pharmacological approach to rescue Trem2-mediated microglial defects
Tutor	Prof.ssa Michela MATTEOLI
Scientific Areas	05 – Biological Sciences
Gross amount of the fellowship	23.000,00 Euro
Duration of the fellowship	23
Objectives of the research	Microglial cells are unique brain resident immune cells. A key role shaping microglia state is played by the innate immune receptor Triggering receptor expressed on myeloid cells 2 (TREM2). TREM2 is crucial in several microglial functions including the microglia-dependent pruning in the developing brain. TREM2 defects, impairing the shaping of microglia states and synapse homeostasis, can result in neurodevelopmental dysfunctions. These observations prompt the research of pharmacological compounds aimed at modulating TREM2 function. We recently reported a novel immunomodulatory sulfolipid named Sulfavant A (SA). We aim to demonstrate that the efficacy of SA in modulating the microglia profile and function depends on the potentiation of TREM2 activity, through an in vitro approach by using microglia isolated from TREM2 WT, Het and KO mice, and in in vivo contexts (WT, Het and KO mice treated with PolyI:C) where altered synapse engulfment and behavioral phenotype have been observed
Activities to be carried out	<ul style="list-style-type: none"> • In vitro: microglial primary culture setup, treatment and morphological analysis on microglia. • In vivo: animal treatments (i.p. and intracranial injections), tissue sampling and analysis

Work place	PIEVE EMANUELE - Milan
Mandatory requirements	<ul style="list-style-type: none"> • Master's degree in Medicine and Surgery, Biology, Molecular Biology, Chemistry and Pharmaceutical technologies; • PhD in Biotechnologies, Biology, Molecular Biology, Biomedical Sciences or related fields; • Adequate scientific and professional background to carry out the research activity described in this call.
Selection process	<p>Application for admissions must be submitted at the following link: 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>
Selection criteria	<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"> • Experience in cell culture and on animal models; • soft skills: excellent teamwork skills, fluent in spoken and written English

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. 182/2023** (<http://www.hunimed.eu/it/lavora-con-noi/>) or send an inquiry to ufficiodocenti@hunimed.eu or telephone +39 02.8224.5642/5421.