OPEN PHD POSITION FOR MARIE SKŁODOWSKA-CURIE INNOVATIVE TRAINING NETWORKS (MSCA-ITN) AT CSIC

MSCA-ITN
TRIM-NET (H2020-MSCA-ITN-2018, GA813599), Training network in drug discovery targeting TRIM Ubiquitin ligases in disease

PROJECT
ESR2. Autophagic defects in Lafora disease due to mutations in the TRIM-like E3 ligase Malin

PhD SUPERVISOR(S)
Pascual Sanz

SCIENTIFIC AREA
Biomedicine

HOST INSTITUTION
Instituto de Biomedicina de Valencia (IBV), CSIC

DURATION
36 months

FIXED START DATE:
Application deadline: April 15, 2019
Start date: 1st September 2019

PLANNED SECONMENT(S):
Part of the training will include secondments (2 periods of 2 moths) one at the University of Trieste (Italy) and the other in another laboratory of the consortium.

EMAIL OF THE PhD SUPERVISOR(S)
sanz@ibv.csic.es

WEBSITE OF THE ITN-MSCA
trimnet@units.it

WEBSITE OF THE RESEARCH GROUP OR CENTRE/INSTITUTE
http://www3.ibv.csic.es/ibv03/USN/usn-index.php
**IDEAL CANDIDATES**

- Early Stage Researchers (ESRs) must, by definition, have less than 4 years full-time research experience (starting from the date of obtaining the degree which would entitle to embark on a doctorate), at the date of the contract.
- ESRs must not have yet a PhD or be enrolled on one.
- ESRs must not have resided, or undertaken employment (main activity) within the host country of the ESR for which they apply for more than 12 months in the last 3 years immediately prior to the reference recruitment date.
- ESRs must be eligible according to EU regulations.
- ESRs must have a Masters-level degree in Biosciences or a related discipline.
- ESRs must have an excellent command of the English language (oral, writing).
- ESRs must have demonstrable ability to conduct research in line with the objectives of the project.
- ESRs must show evidence of planning skills to contribute to the research project.
- ESRs must show its ability to work alone and also as part of a multidisciplinary team
- ESRs must show its willingness to travel within Europe

**DESIRABLE CANDIDATE REQUIREMENTS**

We are looking for an open-minded person with a strong background in Biological sciences (M.Sc. or equivalent graduation obtained before starting date) and experience in human physiology, biochemistry, and/or molecular biology.

The Candidate will be hosted at the unit of Nutrient Signalling at Institute of Biomedicine of Valencia (CSIC), which will provide with the training aspects of the Project. Part of the training will include secondments (2 periods of 2 months) one at the University of Trieste (Italy) and the other at another laboratory within the consortium.
BENEFITS

- Attractive salary and 3-year full-time employment contract.
- Enrollment in the PhD programme of Biomedicine and Biotechnology from the University of Valencia.
- Access to state-of-the-art research and supervision by recognized experts.
- Participation in network-wide training activities, workshops, on-line courses, schools and conferences, in addition to local training activities in the host lab.

PhD PROJECT

Lafora disease (LD, OMIM 254780) is a rare and fatal form of progressive myoclonus epilepsy due to mutations in either of two genes: **EPM2A**, encoding Laforin, a dual specificity phosphatase, and **EPM2B**, encoding Malin, a RING-type E3 ubiquitin ligase, which is evolutionary related to the TRIM family of E3 ubiquitin ligases. We will analyze the involvement of Malin in the regulation of autophagy. Preliminary experiments in the lab indicate that Malin participates in the initial steps of autophagosome formation. This again shows a close relationship between Malin and TRIM E3 ligases, since it has been recently indicated that TRIM family members act both as receptors and as platforms for the assembly of the core autophagy regulators. We will study the possible substrates and mode of action of Malin in the autophagic process. To carry out these studies the physical interaction between Malin and components of the machinery that leads to autophagosome formation will be investigated, both by co-immunoprecipitation and confocal microscopy techniques. In addition analysis of Malin’s ability to ubiquitinate these possible substrates and the topology of the ubiquitin chains in this modification will be addressed. In addition, interactomics and proteomic techniques will be used to identify bona-fide substrates of malin action. Finally and in collaboration with members of the network, we will also study the type of deubiquitinase enzymes (DUB’S) involved in this process. This information will allow the identification of putative therapeutic targets that could ameliorate the pathology present in Lafora disease.
Application procedure

Applications in English should include:
- CV (contact details, education, work experience, list of publications, prizes/awards, language skills, etc….);
- A motivation letter;
- A digital copy of the degree certificate and official academic transcripts of Bsc and Msc studies (Master diploma/certificate or equivalent qualification giving access to the Doctoral Programme + Transcript of Records including examinations and scores obtained. If the documents are issued in a language other than English, a translation must be included, along with the original document);
- A documentation of English language qualifications;
- Two recommendation letters sent directly by the referees to trimnet@units.it with the subject: “Letter concerning - Surname Name” and full contact details of the reference persons;

Application in a single pdf file should be sent by e-mail to trimnet@units.it with indication of “TRIM-NET application” in the subject line. Equal consideration will be given to female and male applicants.