

**ANNOUNCEMENT FOR THE OPENING OF AN INTERNATIONAL SELECTION TENDER
PROCEDURE FOR DOCTORATE HIRING OF DECREE-LAW NO. 57/2016 OF 29 AUGUST,
AMENDED BY 57/2017 LAW OF 19 JULY.**

Internal Reference: JUNIOR_RESEARCHER_II/ERACHAIRNCBIO/IBMC/0308/2023

The IBMC/i3S opens an international call for the recruitment of a Junior Researcher (post-doctoral) working in the area of synaptic transmission (cell biology). Candidates should meet the criteria of "Established Researchers (R2)" established in the European Framework for Research Careers. The appointment will be made as part of the NCBio project: UNLOCKING EXCELLENCE IN RESEARCH AND INNOVATION IN NEUROBIOLOGY AND NEUROLOGICAL DISORDERS AT IBMC/i3S, funded by the European Commission, under the topic WIDESPREAD-06-2020 - ERA Chairs.

1. Project summary:

Astrocytes are the major non-neuronal cell type in the brain. Recent work by our group, and that of others, has revealed that astrocytes are essential for the formation of synapses (points of contact between neurons) in the brain. Furthermore, it appears that astrocytes are specialized to build different types of synapses, including those between either excitatory or inhibitory neurons. Failure of proper synapse formation, and an incorrect balance of excitation and inhibition in the brain, is thought to lead to impairments in information processing, which causes important neuropsychiatric diseases, such as schizophrenia, autism spectrum and epilepsy. We want to identify astrocyte secreted factors that modulate synapse assembly (astrocyte secretome). To do this, we will use cultured astrocytes expressing a novel biotin ligase localized to the endoplasmic reticulum, allowing us to biotinylate proteins as they pass along the biosynthetic-secretory pathway. These proteins can then be purified from the culture media and identified using mass-spectrometry. Proteins of interest will be recombinantly expressed in bacteria, purified and applied to cultured neurons to assess synaptogenic potential. Work will be conducted at i3S, one of Portugal's top science institutes, in the Synapse Biology group led by Dr. Matthew Holt.

Work to be developed by the researcher:

Establishment of relevant tissue culture systems (HEK cells, primary astrocyte and neuronal cultures), transfection and viral vector transduction methodologies, biochemical assays (including pull-downs and mass-spectrometry), protein expression and purification, fluorescence microscopy.

2. Applicable legislation:

- Decree no. 57/2016, amended by Law 57/2017, pertaining to the hiring of candidates with doctoral degrees in the areas of science and technology.
- Labor Law No. 7/2009.
- Regulatory Decree 11-A/2017.

3. The selection jury has the following composition:

Chairman: Matthew Holt

Olga Sin

Stéphanie Castaldo

4. Workplace: IBMC/i3S, Rua Alfredo Allen, 208, Porto, Portugal.**5. Salary:** The position is a Junior Researcher and carries a monthly wage of 2.228,11 Euros, in line with national guidelines.**6. General requirements for the position are:**

- Highly motivated with a Ph.D. degree in neuroscience and a solid track record of achievements (1st author publications, conference talks, posters etc).
- Skilled in advanced molecular biology and protein biochemistry techniques (gene design and cloning, Western blot, immunohistochemistry, RNA isolation, RT-qPCR, transcriptomics, CRISPR-Cas9 systems, proteomics, immunoprecipitation, data analysis tools).
- Experience in tissue culture techniques: establishment and maintenance of cell lines, preparation of primary cortical neuron and astrocyte cultures from mice and rats, genetic manipulation (transfection/transduction).
- Knowledge of fluorescence microscopy (including confocal).
- Ability to work independently, but also capable of collaborative work.
- Fluent in written and spoken English.
- Experience in mouse work (*in utero* electroporation, stereotaxic injections, perfusion, sectioning [vibratome and cryostat] and immunohistochemistry) is desirable, but not essential.

7. The selection will be made through evaluation of the following criteria:

- Track record of achievements (publications, oral presentations, posters) in the field of neural cell biology and synaptic transmission (50%).
- Experience with relevant scientific techniques (40%).
- Letter of motivation (10%).

8. The final classification system for candidates will be expressed on a scale from 0 to 100. Each member of the jury will rank candidates based on the selection criteria and a consensus list will be drawn up of candidate rankings. After review of the files, the top scoring candidate will be appointed to the position, based on the consensus score.**9.** Minutes of the proceedings, including the individual rankings of jury members, will be recorded and made available to candidates when requested.**10.** The final decision of the jury will be ratified by the managing director of the institute, prior to final appointment.**11. Application:**

Applications should be written in English and include:

- a) PhD certificate.

- b) Motivation letter.
- b) Full CV (including names and contact details for three scientific referees).
- c) One first author paper with brief summary of its significance – and relevance to the advertised position.

All documents should be provided in PDF format using the following web link:

https://DOZER.i3s.up.pt/applicationmanagement/#/addapplications/JUNIOR_RESEARCHER_IIERACHAIRNCBIOIBMC03082023

Applications will be accepted from 4th to 18th August to 2023.

Candidates who fail to submit all the required documents will be excluded from the process. In case of doubt, the jury reserves the right to request supporting documents, relevant to the application, from the candidate in question.

12. The list of candidates and their final rankings will be published on the institute website (www.ibmc.up.pt) under 'Open Positions'. Candidates will also be notified of the outcome by email.

13. After publication of the results, candidates have 10 working days to respond. The final rankings will be published 90 days after expiry of the application deadline on the institute website (www.ibmc.up.pt) under 'Open Positions'.

The expected start date of the contract is September 2023, the contract will have a maximum duration of 12 months.

14. This call is specific to the advertised vacancy and can be terminated at any time before approval of the final candidate list.

15. Non-discrimination and equal access policy: Candidates will be assessed using an open, transparent and merit-based recruitment process (OTM-R) based on the guidelines laid down in the European Charter for Researchers. The recruitment process will adhere to current data protection legislation.

The IBMC/i3S actively promotes a policy of non-discrimination and equal access, so that no candidate can be privileged, benefited, harmed or deprived of any right or exempted from any duty resulting from ancestry, age, gender, sexual orientation, marital status, family situation, economic status, education, origin or social status, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic or race origin, territory of origin, language, religion, political or ideological beliefs and union membership.

16. In the event that two candidates of equal scientific merit apply, applicants with proven disability will be given preference (D.L. nº 29/2001). To be considered, disabilities (including type and respective degree of impairment) should be declared upon initial application.