



ANNOUNCEMENT OF AN INTERNATIONAL CALL FOR THE SELECTION OF A PhD HOLDER RESEARCHER UNDER DECREE-LAW NO. 57/2016

Internal code: Researcher/FTC_Proj2020/i3S/0603/2023

A call is opened for the position of a PhD holder, for an unfixed term work contract to carry out research duties within the project " Novel approaches to the development of next-generation antithrombotic leads", with reference PTDC/BIA-BQM/2494/2020, funded by Fundação para a Ciência e Tecnologia IP.

Scientific Area: Life and Health Sciences

1. Project summary and work plan

Thrombosis is a major contributor to the global disease burden. Conditions associated with this disorder are the leading cause of death and disability globally, accounting for an estimated 25% of all deaths and for mounting costs to healthcare systems. Despite the undeniable impact of thromboembolic disease, current therapeutic prevention and treatment strategies are inadequate. Recently developed direct oral anticoagulants possess desirable pharmacological properties but they still do not overcome the bleeding side-effects, especially when used in combination with anti-platelets or tPA. In addition, their widespread adoption is also still limited by their high cost and scarcity of antidotes. These pharmacological side-effects are tightly linked to the mechanism of action of direct oral anticoagulants, which relies on the blockade of the catalytic activity of two key procoagulant enzymes, factor Xa (FXa) and thrombin (FIIa). Our main goal is to find new anticoagulants that can be administered as a monotherapy, or in combination with other agents, to effectively treat or prevent thromboembolic disorders while having little or no impact on haemostasis. Due to the central roles of FIIa and FXa, late participants in this amplification cascade, a therapeutic fine-tuning of the system by directly blocking these procoagulants enzymes is challenging. Thus, this project aims to develop direct anticoagulants against alternative targets in the blood coagulation cascade that have not been clinically exploited to date or represent a completely unexplored mechanism of intervention.

The successful candidate will specifically investigate the inhibition potency and anticoagulant activities *in vitro* of potential inhibitors screened by Random nonstandard Peptide Integrated Discovery (RaPID) and chemically synthesized in collaboration with Prof. Richard Payne (University of Sydney, Australia). The candidate will also study the molecular determinants of inhibition, using X-ray crystallography, perform SAR studies, and investigate the efficacy of lead compounds *in vivo*.

2. Applicable Portuguese legislation

Decree no. 57/2016, of August 29 - Legal Regime of Scientific Employment RJEC - in its current wording

Portuguese Labor Code, in its current wording



3. Jury

Chairman: Dr. Jorge Ripoll Rozada; Other Members: Dr. Pedro J.B. Pereira; Dr. Sandra de Macedo Ribeiro; Substitutes: Dr. Pedro Martins.

4. Workplace

i3S - Rua de Alfredo Allen, 208 Porto, research group Macromolecular Structure.

5. Professional category and monthly remuneration

Junior Researcher

€2.206,05, corresponding to index 33 of the Tabela Remuneratória Única, whose application is intended for PhD holders with limited post-doctoral experience.

6. Obligatory requirements for admission

1. PhD degree in Biochemistry, Biology, Chemistry or a related scientific field. If a foreign higher education institution has conferred the degree, it must comply with the provisions of Decree-Law 66/2018, of 16th August, and any formalities established therein must be fulfilled by the date of signing the contract.
2. Proven experience in Biochemistry, Structural Biology or a related discipline;
3. Relevant publication track record (including first authorship of at least two peer-reviewed scientific publications) in international peer-reviewed journals, preferably in the fields mentioned above;
4. Fluency in spoken and written English;
5. Strong hands-on experience in molecular cloning, recombinant protein expression (*E. coli* and baculovirus systems) and purification, protein characterization, enzymology and macromolecular crystallography;
6. Ability to work independently but also to be a proactive member within a multidisciplinary team.

7. Evaluation of the applications and publication of the results

Under the terms of article 5 of RJEC, the evaluation of the scientific and curricular background of the candidates should focus on the activity of the last five years that the candidate considers most relevant. The five-year period may be extended by the jury, at the candidates request, when justified by suspension of scientific activity for socially protected reasons, namely for reasons of parental leave, prolonged serious illness, and other situations of unavailability for work that are legally protected.

Weight of the different curricular valuation criteria:

a) Detailed Curriculum (75%):

- Relevant laboratorial experience in the research area of the application

(50%)

- Scientific and technological production, including oral/poster communications, publications and impact factors (15%)
- Participation in research projects (10%)

b) Letter of motivation (20%)

- Interest and motivation for the research area of the project (15%)
- Proficiency in English and written communication (5%)

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c) Recommendation letters (5%)

If the jury decides to obtain further clarifications and additional information about the curricular elements presented, the best three candidates classified on the basis of the curriculum may be called for an interview. In this case, the curricular evaluation will weight 90% for all candidates (a) 67.5%, b) 18% e c) 4.5%) and the interview will weight 10%.

Candidates are excluded from admission to this call if they do not fill out their application correctly or do not meet the obligatory admission requirements. If in doubt, the jury may ask any candidate additional documents in support of their statements.

False statements made by candidates will be sanctioned in accordance with the law.

The jury will draw up minutes of its meetings, which can be consulted at the candidate's request within 10 working days after the selection results are released.

The jury deliberates by means of a reasoned roll-call vote according to the evaluation criteria, with no abstentions allowed, and draws up a list of excluded and admitted candidates, ordered by respective classification.

All candidates are notified of the selection results by email. After notification, candidates have 10 working days to comment.

In the 90 days following the deadline for submission of applications, the jury's final decision is communicated to the candidates. Subsequently the institute Director, who is also responsible for the final decision of hiring, will ratify the decision of the jury.

This call is intended exclusively to fill the indicated position on offer and may be canceled before the final ranking list of candidates is ratified by the Director. Accordingly the position will no longer be available.

8. Submission of applications

Applications must include all the documents proving that they fulfill the admission requirements, namely:

- a) Copy of certificate or diploma;
- b) Detailed Curriculum Vitae;
- c) Other documentation relevant for the evaluation of qualifications in a related scientific area;
- d) Letter of motivation (in English – mandatory);
- e) Two recommendation letters.



The submission of applications is digital, in pdf format, from 6 to 31 March 2023, in the following link:

https://DOZER.i3s.up.pt/applicationmanagement/#/addapplications/ResearcherFTC_Proj2020i3S06032023

9. Start and duration of the contract

The anticipated start date of the contract is May 1, 2023 and is subject to budget availability. The maximum duration of the contract will be 13 months, but may not exceed the project end date, currently set for February 29, 2024.

10. Non-discrimination and equal access policy

i3S actively promotes a policy of non-discrimination and equal access. No applicant shall be privileged, benefited, prejudiced, or deprived of any right or exempted from any duty on the basis of ancestry, age, gender, sexual orientation, marital status, family situation, economic situation, education, origin or social condition, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological beliefs, or trade union membership.

Within the framework of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, i3S adopts the Open, Transparent and Merit-based (OTM-R) principles for the recruitment of researchers, with the aim of conducting fair and transparent recruitment processes, bringing equal opportunities to all candidates.

11. Applicants with disabilities

Under the terms of Decree-Law 29/2001, of February 3, the candidate with a disability is given preference in equal ranking, which takes precedence over any other legal preference. Candidates must declare under oath their degree of disability, the type of disability and the means of communication/expression to be used in the selection process, under the terms of the aforementioned decree.