



Faculty of Pharmacy of the University of Lisbon
Call for the award of 2 (two) Research Grants for PhD students

Notice no. BID/5/FF/2022

Under the Regulation of Research Grants of the Foundation for Science and Technology, IP, Regulation No. 950/2019, published in *Diário da República*, 2nd Series, No. 241, of 16 December, of the Regulation of Research Grants of the University of Lisbon, Dispatch No. 6238/2020, published in *Diário da República*, 2nd Series, no. 113, of 12 June, and of the Statute of the Research Fellowship (EBI), Decree-Law no. 123/2019, published in *Diário da República*, 1st Series, no. 164, of 28 August, it is made known that a call for the award of 2 (two) Research Grants for PhD students within the scope of the project “Fragment-Screen: From fragments to high affinity binders interfacing integrated structural biology, medicinal chemistry and artificial intelligence” (HORIZON-INFRA-2022-TECH-01-01 – 101094131), funded by the European Union through the Horizon Europe program, under de Grant Agreement No. 101094131, is open under the following conditions:

I. **Scientific Area:** Pharmaceutical and Therapeutic Chemistry

II. **Admission Requirements:**

- Master degree in Medicinal Chemistry, Organic Chemistry, Chemoinformatics, Chemical Engineering, Machine Learning or related disciplines;
- Be enrolled in a doctoral program in Pharmacy*

*During the application stage, if the candidates do not have in their possession the document proving the enrolment in a doctoral program, it may be replaced by a declaration of honour. The proof of the enrolment must be carried out until the date of contract signature, under consequence of withdrawal of the candidate’s assessment due to error regarding the factual assumptions, and consequent exclusion from this application.

Preferred Requirements:

- Experience in modern synthetic chemistry, purification, and structural characterization methods
- Experience in fragment-based drug design
- Motivation to work on ambitious and multidisciplinary projects
- Team member with ease of communication in English
- Proactive attitude, inclusive mindset and desire to work outside of the comfort zone

Beneficial Requirements:

- Experience in programming (e.g., Python) and machine learning

III. **Research Grant Duration:** The research grant will have a duration of 12 months eventually renewable up to a maximum of 36 months, starting in February 2023, on an exclusivity regime, in accordance with the terms of the Regulation of Research Grants of the Foundation for Science and Technology, IP.

IV. **Work Plan:** Within the scope of the Covid Moonshot program several potential and druggable SARS-CoV-2 targets were co-crystallized with fragments. The PhD students will optimize those fragments in order to improve affinity, while maintaining excellent physicochemical properties that enable advanced pre-clinical studies. The optimization of fragments will be guided by X-ray

crystallography, biophysical assays for affinity measurement and artificial intelligence. The PhD students will apply and develop skills in medicinal chemistry and artificial intelligence to deliver high quality leads.

- V. **Workplace and Scientific Guidance:** The work will be carried out at research premises in the Faculty of Pharmacy, University of Lisbon, under the supervision of Tiago Correia de Oliveira Rodrigues, PhD, Assistant Professor, and Rui Ferreira Alves Moreira, PhD, Full Professor, both from the Faculty of Pharmacy of Universidade de Lisboa.
- VI. **Monthly maintenance stipend:** The monthly maintenance stipend (grant) corresponds to 1.144,64€, according to the table of values directly attributed by FCT, I.P. in Portugal (<https://www.fct.pt/apoios/bolsas/valores>). Payment will be made via bank transfer.
- In addition to the monthly maintenance stipend the grant holder will also be awarded with the value correspondent to the payment of the first step of *Seguro Social Voluntário* (voluntary payment of Social Security), in case he/she chooses to be included in this regime.
- VII. **Formalization of applications:** Applications must be sent in non-editable format (PDF), to the email nrhgd@ff.ulisboa.pt, containing the identification of the above-mentioned notice. Applications in paper format will not be accepted.
- VIII. **Application deadline:** The deadline for applications is from December 19th 2022 to January 2nd 2023 (10 working days).
- IX. **Evaluation and rating criteria:**

Candidate's Merit: Aims to assess compliance with the formal requirements requested in the opening notice, but also to consider the suitability of the scientific area of training and/or specialization, training and professional experience.

- **Adequacy of the Scientific Training Area (AACF):** Weighting of 20%
 - Master degree in Medicinal Chemistry, Organic Chemistry, Chemoinformatics, Chemical Engineering, Machine Learning – 0 to 20 values
- **Training and Experience (FE):** Weighting of 30%
 - Evidence of application of synthesis, purification and structural identification methods to access bioactive molecules – 0 to 20 values
- **Specific competencies for the proposed work plan (CEPTP):** Weighting of 30%
 - Experience in fragment-based drug design – 0 to 20 values

The best 5 candidates will be invited to an interview with a maximum duration of 30 minutes. The interview will have a maximum weighting of 30% and aims to objectively and systematically evaluate the following criteria:

- Quality of professional experience
- English proficiency
- Motivation
- Analytical and critical thinking

The classification of the Selection Interview will be attained by the average of the grades reached in each evaluation criteria according to the following parameters: **Excellent** (20 values), **Very Good** (18 values), **Good** (16 values), **Adequate** (12 values) e **Insufficient** (8 values), being for this purpose filled an individual form for each candidate.

Final classification: The score obtained in the final classification results from the sum of the points obtained in the Candidate's Merit, and in the Selection Interview, and an individual form will be filled for each candidate.

X. Instruction of Application:

- a. Application form containing the candidate's identification (*available on the institutional website*);
- b. *Curriculum Vitae* containing the information necessary for the evaluation of the application;
- c. Certificate proving ownership of a Master degree in Medicinal Chemistry, Organic Chemistry, Chemoinformatics, Chemical Engineering, Machine learning or related areas (*available on the institutional website*);
- d. Proof of enrolment in a doctoral program, or substitution by presenting a declaration of honour (*available on the institutional website*);
- e. Declaration of honour stating that there is no professional activity that violates the exclusivity regime (*available on the institutional website*);
- f. Letter of motivation;
- g. Contact of two references;
- h. Two page summary of previous research work.

The documents that instruct the application must be submitted in Portuguese or English language.

No document that should have been submitted in the application phase can be submitted after the deadline set in the opening notice. Failure to comply with the deadline set for the submission of the application, as well as the lack or late submission of documents referred to in this point will determine the exclusion from the competition.

All the documents necessary for the submission of the application are available on the institutional website, through the link: <https://www.ff.ulisboa.pt/faculdade/a-fful/legislacao-e-documentos-legais/recursos-humanos-2/bolsadeinvestigacaoparaestudantesdedoutoramento-horizon-infra-2022-tech-01-01-101094131>

XI. Composition of the Jury:

The Jury responsible for the selection of the candidates will be constituted by:

President – Tiago Correia de Oliveira Rodrigues, PhD, Assistant Professor, FFUL;

1st Member of the Jury – Rui Ferreira Alves Moreira, PhD, Full Professor, FFUL;

2nd Member of the Jury – Pedro Miguel Pimenta Góis, PhD, Assistant Professor with Habilitation, FFUL

1st Alternate Member of the Jury – Francisca da Conceição Lopes, PhD, Associate Professor with Habilitation, FFUL

2nd Alternate Member of the Jury – Carlos Alberto Mateus Afonso, PhD, Full Professor, FFUL

- XII. **Form of notification of results:** All candidates will be notified of the final results of the evaluation by email and will have 10 working days after the aforementioned notification to make a statement, in accordance with the Code of Administrative Procedure.

After this notification, and in case there are no claims, the results will become final. In case of claims, and after the allegation is analyzed and accepted or rejected, the results will become final after 10 working days.

After the final decision is made, a complaint/appeal can be filed to the Director of the Faculty of Pharmacy of the University of Lisbon, Maria Beatriz da Silva Lima, PhD, Full Professor, within 10 working days from the date of notification.

- XIII. **Applicable legislation and regulations:** Regulation no. 950/2019, Regulation of Research Grants of the Foundation for Science and Technology, I.P. (FCT, I.P.), published in *Diário da República*, 2nd Series, no. 241, of December 16, Regulation of Research Grants of the University of Lisbon, Order no. 6238/2020, published in *Diário da República*, 2nd Series, no. 113, of 12 June, republished by Dispatch No. 8061/2022, published in *Diário da República*, 2nd Series, no. 126, of July 1st, and Research Fellowship Statute (EBI), Decree-Law no. 123/2019, published in *Diário da República*, 1st Series, no. 164, of 28 August.

Faculty of Pharmacy of the University of Lisbon, December 16th 2022.

The Director,



Maria Beatriz da Silva Lima, PhD, Full Professor