

**Faculty of Pharmacy Research and Development Association  
Call for the award of a Research Grant (Bolsa de Investigação)**

**Notice No. BI/6/FARM-ID/2021**

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 December 16, 2019, of the Regulation of Research Grants of the University of Lisbon, Dispatch No. 6238/2020, of 12 June, published in *Diário da República*, 2nd Series, no. 113, of 12 June 2020, and of the Statute of the Research Fellowship (EBI), Decree-Law no. 123/2019, of 28 August, published in the *Diário da República*, 1st Series, no. 164, of 28 August 2019, it is made known that a call for the award of a Research Grant within the scope of the project PTDC/BIA-BFS/29448/2017 - GD&PDBiophys: Exploring the biophysical link between Gaucher disease and Parkinson's disease, funded by Fundação para a Ciência e a Tecnologia (FCT), is open under the following conditions:

**I. Scientific Area:** Biophysics, Biochemistry

**II. Admission Requirements:**

- 5-year Pre-Bologna degree (minimum 300 ECTS) and/or MSc in Biochemistry, Biophysics, Pharmaceutical Sciences or related areas;
- Be enrolled in a Doctoral Programme or submit a declaration compromising to register in a Doctoral Programme prior to the start of the grant;
- Submit a proposal with the Work Plan to be developed.

**Preferred Requirements:**

- Experience in scientific research in the area for which the call is open;
- Skills in fluorescence microscopy techniques
- Skills in fluorescence spectroscopy,
- Experience in cell culture and preparation of mimetic systems of biological membranes;
- English proficiency;
- Availability to join the project until September 1<sup>st</sup> 2021.

Research grants may not be awarded to those who have already benefited from research grants directly or indirectly financed by FCT, awarded under the terms of the Research Fellow's Statute, or who are in a situation of unjustified breach of the grant holder's duties during the previous contract (no. 3 of article 13 of Regulation no. 950/2019).

**III. Research Grant Duration:** The research will have a duration of 12 months, non-renewable, starting until September 1<sup>st</sup> 2021, 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:** The GBA1 gene encodes the enzyme glucosylcerebrosidase (GCase). Mutations in this gene cause GCase deficiency resulting in Gaucher disease (GD). However, mutations in GBA1 are also the main genetic risk factor for the development of Parkinson's disease (PD). Evidence suggests the existence of a regulatory loop in which the decrease in GCase activity causes aggregation of alpha-synuclein (aSyn) and lysosomal dysfunction characteristic of PD. On the other hand, the aSyn aggregates, characteristic of PD, cause GCase dysfunction by inhibiting its trafficking to lysosomes. These cellular processes are

dependent on the correct functioning of biological membranes and, therefore, on their biophysical characteristics, such as fluidity. Preliminary evidence suggest that GD and PD cell models present similar alterations in the fluidity of membranes, suggesting the existence of a common molecular mechanism contributing to pathology. Thus, the goal of this project is to investigate the molecular mechanisms underlying GD and PD, focusing on the changes occurring in the structure and properties of biological membranes. For this, a multidisciplinary approach combining biophysical, biochemical, cell biology and advanced microscopy methods will be used, which will allow investigating the link between membrane biophysical properties and lysosomal dysfunction in GD and PD through:

- Biochemical and biophysical characterization of cell models of Gaucher disease and Parkinson's disease;
- investigate the biophysical mechanisms linking the two diseases;
- Targeting membrane properties as potential therapy;
- Biochemical and biophysical characterization of cell models of Gaucher disease and Parkinson's disease;
- investigate the biophysical mechanisms linking the two diseases;
- Targeting membrane properties as potential therapy.

**V. Workplace and Scientific Guidance:** The work will be carried out in Research Institute for Medicines (iMed.Ulisboa), at the premises of the Faculty of Pharmacy of the University of Lisbon, under the scientific guidance of Dr. Liana Silva.

**VI. Monthly maintenance stipend:** The monthly maintenance stipend (grant) corresponds to € 1.104,64, 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 address [concursos@farm-id.pt](mailto:concursos@farm-id.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 **June 11<sup>st</sup> to 1<sup>st</sup> July 2021** (15 working days).

**IX. Evaluation and rating criteria:**

**Candidate's Merit:**

- **Adequacy of the Scientific Training Area (ASTA):** Candidates will be ranked based on the following criteria, with a maximum weighting of 20%.
  - Scientific area of the Pre-Bologna and/or MSc degree and respective classification.

**Education and Experience (EE):** Candidates will be ranked based on the following criteria, with a maximum weighting of 40%.

- Lab experience
- Participation in research projects
- Scientific papers



- Scientific communications
- **Specific skills for the proposed work plan (SSWP):** Candidates will be ranked based on the following criteria, with a maximum weighting of 40%.
  - Skills in fluorescence microscopy
  - Skills in fluorescence spectroscopy
  - Cell culture
  - Preparation of systems mimetic of biological membranes
  - English proficiency

In case it proves necessary, an individual interview will be held to the 3 best candidates. The individual interview aims to evaluate in an objective and systematic way, the following criteria.

- Quality of Professional Experience (QPE);
- Verbal Fluency Ability (VFA);
- Motivation and Responsibility (MR);
- Critical Sense (CS);
- Level of knowledge in the area (LKA).

The score of the Individual Interview will be obtained by the simple arithmetic mean of the classification criteria, which will be done according to the following parameters: **High** (20 values), **Good** (16 values), **Sufficient** (12 values), **Reduced** (8 values) and **Insufficient** (4 values), by filling in an individual form.

**Final classification:** The score obtained in the final classification results from the sum of the points obtained in the Candidate's Merit, in which an individual form will be filled for each candidate. In case an interview is made, the score will result from the sum of the points obtained in the Candidate's Merit (weight 50%) and in the Interview (weight 50%), in which an individual form will be filled for each candidate.

**X. Instruction of Application:**

- Application form containing the candidate's identification (available through the link [https://www.ff.ulisboa.pt/farm-id/?lang=en#tab\\_recruitment](https://www.ff.ulisboa.pt/farm-id/?lang=en#tab_recruitment));
- Curriculum Vitae containing the information necessary for the evaluation of the application;
- Certificate proving enrolment in a Doctoral Programme or a declaration compromising to enrol in a Doctoral Programme prior to the start of the grant;
- Work Plan to be developed;
- Declaration on honour stating that there is no professional activity that violates the exclusivity regime (available through the link [https://www.ff.ulisboa.pt/farm-id/?lang=en#tab\\_recruitment](https://www.ff.ulisboa.pt/farm-id/?lang=en#tab_recruitment));
- Letter of motivation;
- Contact of two references;
- Other supporting documents considered relevant.

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.

- XI. Composition of the Jury:** The Jury responsible for the selection will be constituted by the President, Doctor Liana Silva, and the jury members Doctor Helena Florindo and Doctor Rita Guedes, Doctor Elsa Rodrigues (substitute member) and Doctor Maria João Gama (substitute member).
- 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 say something, in accordance with the terms of 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 analysed and accepted or rejected, the results will become final after 10 business days.
- After the final decision is made, a complaint/appeal can be filed to the Director of the FARM-ID - Faculty of Pharmacy Research and Development Association, Maria Beatriz da Silva Lima, PhD, Full Professor, within 10 working days from the date of notification.
- XIII. Applicable legislation and regulations:** Regulation of Research Grants of the Foundation for Science and Technology, I.P. (FCT, IP), Regulation no. 950/2019, published in the Diário da República, 2nd Series, no. 241, of December 16, 2019, of the Regulation of Research Grants of the University of Lisbon, Order no. 6238/2020, of 12 June, published in the Diário da República, 2nd Series, no. 113, of 12 June 2020, and of the Research Fellowship Statute (EBI), Decree-Law no. 123/2019, of 28 August, published in Diário da República, 1st Series, no. 164, of 28 August 2019.

Faculty of Pharmacy Research and Development Association, 25 of May 2021.

The Vice-President,



(Prof.ª Doutora Maria do Rosário Beja de Figueiredo Gonzaga Bronze, PhD, Associate Professor)