

#4349

**Public Notice - International Selection Procedure**  
**PhD Scientific Researcher Recruitment (Initial Stage Researcher)**  
**FCiências.ID/2023/DL57/IBEB/1**

**FCiências.ID - Associação para a Investigação e Desenvolvimento de Ciências**, through its Chairman of the Board of Directors, hereby announces the opening of an international call for the recruitment of a Scientific Researcher with a PhD degree, in the category of Initial Stage Researcher, of the FCiências.ID Scientific Research Career, within the scope of the project AxillaBreastMWI: First Patient Study for Axillary and Breast Medical Microwave Imaging (Ref. 2022.08973.PTDC), financed by Fundação para a Ciência e a Tecnologia, I.P./MCTES through national funds (PIDDAC), in the form of an indefinite duration fixed-term employment contract, on an exclusive regime, according to the Portuguese Labour Code and Decree-Law No. 57/2016, of August 29<sup>th</sup>, as amended by Law No. 57/2017, of July 19<sup>th</sup>.

### **I. Admission Requirements**

Portuguese nationals, foreign and stateless persons may submit applications to this selection procedure, provided they hold a doctoral degree<sup>1</sup> in Biomedical Engineering and Biophysics or similar areas, and fully comply with the following requirements:

- a) The PhD must have been granted less than 2 years;
- b) Demonstrated scientific and/or professional experience in the area of Biomedical Engineering and Biophysics – information provided in the CV and/or in the motivation letter;
- c) Demonstrated experience in microwave medical imaging, with experience in experimental prototypes and simulation software's (e.g. CST, COMSOL or SEMCAD), preferably in the context of breast cancer diagnosis – information provided in the CV and/or in the motivation letter;
- d) Knowledge and experience in programming in Matlab (including FDTD implementations), Mathematica and Python – information provided in the CV and/or in the motivation letter;
- e) Knowledge and experience in segmentation in Magnetic Resonance Imaging, development of models suited to 3D printing and other techniques to model anthropomorphic phantoms – information provided in the CV and/or in the motivation letter;
- f) Experience in writing clinical protocols and consent forms – information provided in the CV and/or in the motivation letter;
- g) Demonstrated experience in supervising Bachelor, Masters and/or PhD students in the scientific area of this call for applications – information provided in the CV and/or in the motivation letter;
- h) Scientific experience in the items above, demonstrated by the quality and number of publications (minimum of 10) in international scientific journals and or conferences reviewed by peers, in the scientific area of this call – information provided in the CV and/or in the motivation letter;
- i) Scientific and/or professional experience in participation in national and/or international scientific projects in the scientific areas of this call for applications - information provided in the CV and/or in the motivation letter.

<sup>1</sup> Please note that Degrees obtained in foreign countries need a Portuguese Recognition issued by a Portuguese high degree Institution, according to the [Decree-Law nr. 66/2018](#), of August 16<sup>th</sup> and the [Ministerial Order nr. 33/2019](#), of January 25<sup>th</sup>. The presentation of such Recognition is mandatory for contract signature. More information can be obtained in: <https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition>.

### **II. Preferential Requirements**

- a) R&D activity in a research unit dedicated to Biomedical Engineering and Biophysics or similar areas - information provided in the CV and/or in the motivation letter;
- b) Other professional experience in laboratory management – information provided in the CV and/or in the motivation letter;

- c) Demonstrated experience in outreach activities in the scientific area of this call for applications - information provided in the CV and/or in the motivation letter;
- d) Proficiency in Portuguese and English (written and spoken) – information provided in the CV and/or in the motivation letter.

### **III. Applicable Law**

1. Decree-Law No. 57/2016, of August 29<sup>th</sup> (RCD), in the wording conferred on it by Law No. 57/2017, of July 19<sup>th</sup> (RCD);
2. Portuguese Labour Code, as approved by Law No. 7/2009, of February 12<sup>th</sup>, in its current version (CT);
3. Regulatory Decree No. 11-A/2017, of December 29<sup>th</sup>;
4. Administrative Procedure Code, as published in Decree-Law No. 4/2015, of January 7<sup>th</sup>, in its current version (CPA).

### **IV. Work plan**

The work plan includes the following tasks of the AxillaBreastMWI2022 project:

- T1.1 Design of antenna configuration for breast and axillary prototypes.
- T1.2 FDTD simulations using simplified and realistic models of the breast and axillary region.
- T1.3 Implementation of signal processing algorithms for microwave image reconstruction.
- T1.4 Evaluation of imaging results and fine-tuning of the antenna configuration.
- T2.1 3D-printing of anthropomorphic breast and axillary phantoms and creation of Tissue Mimicking Materials (TMMs).
- T2.2 Building experimental breast and axillary MWI prototype.
- T2.3 Measurements of MWI reflections from breast and axillary phantoms using the prototype, and microwave image reconstruction.
- T3.1 MWI exam of female volunteers (also undergoing an MRI exam).
- T3.2 Full comparison of imaging results obtained with MWI versus MRI exams for the same patient.
- T4.1 Publication of scientific papers aimed at high impact factor peer-reviewed journals and conferences.
- T4.2 Public Engagement Activities.

### **V. Composition of the Jury**

In accordance to article 13 of the RCD, the members of the jury are:

- President - Raquel Cruz da Conceição (Assistant Professor with Habilitation, Coordinator of Instituto Biofísica e Engenharia Biomédica);
- 1<sup>st</sup> Member of the jury – Nuno Ricardo da Cruz Garcia (Assistant Professor, LASIGE);
- 2<sup>nd</sup> Member of the jury – João Miguel Pinto Coelho (Assistant Investigator, Vice-coordinator of Instituto Biofísica e Engenharia Biomédica);
- 1<sup>st</sup> Alternate Member of the jury – Nuno Miguel Azevedo Machado de Araújo (Associate Professor with Habilitation, Coordinator of Centro de Física Teórica e Computacional);
- 2<sup>nd</sup> Alternate Member of the jury – Nuno Miguel de Pinto Lobo e Matela (Assistant Professor, Vice-coordinator of Instituto Biofísica e Engenharia Biomédica).

### **VI. Place of work**

Work will be developed at the facilities of Research Center IBEB – Institute of Biophysics and Biomedical Engineering, in Campo Grande, Lisboa, Portugal.

### **VII. Contract Duration**

The full-time indefinite duration fixed-term employment contract, on an exclusive regime, is expected to start in September 2023, and will last until the Work Plan referred to in section IV is completed. It will

have an expected duration of 11 months, will not exceed the limits set in the RCD, including an initial experimental trial period of 30 days.

### **VIII. Monthly Allowance**

The gross monthly salary is stipulated in clause 1 a) of article 15 of the RCD, corresponding to level 33 of the Single Remuneratory Table, as approved by Government Order No. 1553-C/2008, of December 31<sup>st</sup>, in its current version, being 2228,11 Euros, on an exclusive regime, on which legal discounts will apply, plus holiday and Christmas allowances, as well as food allowance in the amount and conditions set out for workers with a legal employment relationship under the Labour Code.

### **IX. Evaluation of applications**

1. Failure to comply with the Admission Requirements implies the non-admission of candidates in absolute merit.
2. According to article 5 of the RCD, the selection of the candidates approved in absolute merit will rely on the evaluation of their scientific and curricular achievements in the last five (5) years, taking into consideration the quality and relevance of the scientific production, and the professional activity indicated as more relevant by the candidate, within the scope of the project AxillaBreastMWI.
3. Based on the assessment of the candidates' scientific and curricular background in the last five (5) years, each member of the jury presents a justified proposal for admission (final classification equal to or greater than 80%) or exclusion (final classification below 80%) for each candidate, according to the evaluation criteria referred to in no. 5.
4. The final classification of candidates is given on a scale of 0 to 100%.
5. Evaluation of the relative merit of candidates, will rely on the following criteria:
  - a) Scientific publications in the area - 35%;
  - b) Motivation letter - 20%;
  - c) Participation in relevant scientific projects in the area - 35%;
  - d) Pedagogical, extension and outreach of knowledge activities, in particular in the context of the promotion of scientific practices, organization of courses, seminars and conferences for promotion and dissemination in the area of in the scientific area of this call for applications - 10%;
  - e) Interview, if deemed necessary by the jury - 10%.
6. The jury may decide to interview the two best ranked candidates [in criteria a) to d) of no. 5], for clarifications and improved explanations of curricular elements. If there is an interview, the sum of the classification obtained in the evaluation criteria a) to d) will correspond to 90% of the final classification and the interview will correspond to 10%.
7. The jury shall deliberate by means of a roll-call vote based on the evaluation criteria.
8. Minutes of the jury meetings are drawn up, summarizing all relevant elements considered by jury members, as well as their individual votes and justifications.
9. After completion of the evaluation process, the jury will draw up a ranking of successful candidates with their classifications.
10. Hiring will be decided by the Chairman of the Board of Directors of FCIências.ID, based on the final jury recommendation.
11. The evaluation results will be published on the website of the FCIências.ID ("Concursos" tab). The candidates will be individually notified of the evaluation results by e-mail sent to the address indicated in the "Personal Data" section of the submitted form.

12. With the notification referred to in the no. 11, the hearing phase of interested parties referred to in Article 121 *et seq.* of the CPA will begin, and last for ten working days.
13. The possible pronouncement of the candidate in a prior hearing must be addressed to the President of the jury and submitted in writing to [concursos@fciencias-id.pt](mailto:concursos@fciencias-id.pt). The President of the jury will convene a jury's meeting to produce the final decision, within thirty working days.
14. Within five working days of the final jury decision, the Chairman of the Board of Directors of FCIências.ID will approve it and the candidates will be notified.
15. The communication between FCIências.ID ([concursos@fciencias-id.pt](mailto:concursos@fciencias-id.pt)) and the candidates will be electronic and will comply with the following rules:
  - a) At the time of electronic submission of any document - namely in the case of no. 13 - the candidates must generate proof of "sent message".
  - b) FCIências.ID will send an email message acknowledging documents received to the email address used by the candidates, within two working days.
  - c) In case of absence of a confirmation receipt by FCIências.ID – showing the possibility of technical problems that should neither be the responsibility of the candidate nor FCIências.ID - the candidates should contact FCIências.ID, with the proof referred to in point (a), to ensure delivery and proper receipt of the documents concerned.

#### **X. Processing of personal data**

1. FCIências.ID - Associação para a Investigação e Desenvolvimento de Ciências, as the responsible for processing the personal data, in accordance with the [General Data Protection Regulation](#), collects and processes the personal data requested in the context the job application, under paragraphs b) and c) of Article 6.1 of the General Data Protection Regulation (RGPD).
2. The personal data shall be kept for the period necessary for the execution of the purposes for which they are intended, and the processing and protection, in an appropriate and diligent manner, of the confidentiality and integrity of such data shall be ensured through appropriate technical and organisational measures.
3. Personal data may be transmitted to third parties, namely the entity funding the research project, solely for the purposes specifically established. In this sense, whenever necessary the transfer of personal data to countries outside the European Union and/or international organizations, compliance with the applicable legal provisions shall be ensured.
4. You have the right to request access, rectification, erasure, limitation of processing, the right to object and also data portability (if technically feasible) by sending an e-mail to: [dpo@fciencias-id.pt](mailto:dpo@fciencias-id.pt). You also have the right to lodge a complaint with the National Data Protection Commission.
5. For more information, we recommend that you consult the Internal Rules of Data Protection of FCIências.ID - Association for Research and Development of Sciences at <https://fciencias-id.pt/>.

#### **XI. Compliance with public policies**

1. FCIências.ID actively promotes a policy of non-discrimination and equal access, so that no candidate can be privileged, benefited, disadvantaged or deprived of any right or exempt from any duty due to, inter alia, ancestry, age, sex, sexual orientation, marital status, family status, economic situation, education, social origin or condition, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological beliefs and trade union membership.
2. Under the terms of D.L. No. 29/2001, of February 3<sup>rd</sup>, a disabled candidate has a preference in equal classification, which prevails over any other legal preference. Candidates must declare their respective 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 above-mentioned diploma.

## **XII. Submission of Applications**

1. The present call will be open from the 28<sup>th</sup> of June 2023 to the 11<sup>th</sup> of July 2023.
2. The application and all the required documents must be submitted in Portuguese or English.
3. Applications will be submitted online, through the electronic platform of FCIências.ID (<http://concursos.fciencias-id.pt>).
4. On the electronic platform, applicants will complete a mandatory section on Personal Data [name, address, date of birth, contact email, nationality and scientific identifiers] and upload files with the documents listed below:
  - i.* Detailed *Curriculum vitae* in PDF format - *mandatory*;
  - ii.* A motivation letter clearly demonstrating that the candidate has an adequate profile for the position and fully complies with the Admission Requirements - *mandatory*;
  - iii.* Up to five publications relevant for the objectives of the Work Plan - *mandatory*;
  - iv.* Reference letter (maximum 1) – *optional*;
  - v.* Digital copies of documents proving formal academic degrees (PhD) and/or other scientific and professional qualifications - original documents must be provided in case of actual recruitment - *mandatory*;
  - vi.* Other documents that candidates consider relevant for the assessment of their scientific merit, or to declare the personal situation in the cases covered in section XI-2 of this Notice - *optional*.
5. By decision of the Chairman of the Board of Directors of FCIências.ID, candidates who do not submit the documents identified in no. 4 will not be admitted to the call. In case of doubts, the Chairman may also invite candidates to substantiate specific data or statements with official supporting documents, before accepting the candidates' submission.

This Public Note was approved by the jury on the 27<sup>th</sup> of June 2023.