



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

Code: **Researcher/FCT\_PROJ2020/i3S/0904/2021**

The meeting of the Board of Directors of i3S deliberated the opening of an international selection tender for 1 vacancy of doctorate to perform duties of scientific research in the scientific area(s) of Health and Life Sciences, under a work contract with non-fixed term under the Portuguese Labor Law in order to perform duties, as researcher within the project with the reference **PTDC/MEC-RES/0158/2020** and the title **“Host-microbiome interactions in the quest for Fibrosing ILD Biomarkers that Rule Acceleration (FIBRA-Lung)”** at i3S, financed by Portuguese funds through FCT - Fundação para a Ciência e a Tecnologia/Ministério da Ciência, Tecnologia e Ensino Superior.

### **1. Project’s summary**

Interstitial lung diseases (ILDs) comprise a heterogeneous group of diffuse parenchymal lung disorders, characterized by the infiltration of immune effector cells, fibroblasts, myofibroblasts and extracellular matrix deposition. ILDs alter the normal respiratory physiology, eventually leading to disability and death. Some ILDs, such as idiopathic pulmonary fibrosis (IPF), are primarily considered fibroproliferative disorders and associate to a dismal prognosis with median survival of only 2-5 years from diagnosis. Non-IPF ILDs show a combination of inflammatory and self-sustained fibrotic processes, that may continue to progress in severity despite standard treatment with immunomodulatory drugs. These disorders have been collectively named as progressive fibrosing ILDs (PF-ILDs), and are associated with high morbidity and mortality. A larger extent of fibrosis on high-resolution computed tomography scans and greater decline in lung function are predictors of mortality, but the course of disease for an individual patient cannot be accurately predicted using the currently available tools, which represents an unmet medical need.

PF-ILDs are multifactorial diseases, which involve complex interactions between host genetics and different environmental triggers, shaping the immune milieu that ultimately drives the fibrotic cascade in a susceptible patient. Most research has been focused in IPF and has unveiled both genomic variants of risk and specific transcriptional signatures associated with accelerated clinical course. In addition, advances in molecular sequencing technology allowed the study of the patient’s microbiota composition in lung fibrosis pathology. Again, greater evidence exists in IPF, in which an increased bacterial burden and/or abundance of potentially pathogenic bacteria may induce disease progression, acute exacerbations, and mortality. Interestingly, recent findings highlight an interaction between the genetic background of the patient and the lung microbiome. In IPF patients, bacterial burden was associated with a polymorphism in the promoter of the mucin gene *MUC5B*, which is a proven host susceptibility factor for lung fibrosis. Another genomic marker, the intronic *TOLLIP* variant, was correlated to IPF mortality, and a possible link with microbial pathogens exists, given its role at regulating the innate immune responses mediated through toll-like receptors (TLRs). For instance, TLR9 is overrepresented in lungs of IPF patients with rapidly progressive disease and its expression was positively correlated with Staphylococcal OTU1348, suggesting that TLR9 signaling may depend on lung

**INSTITUTO  
DE INVESTIGAÇÃO  
E INOVAÇÃO  
EM SAÚDE  
UNIVERSIDADE  
DO PORTO**

Rua Alfredo Allen, 208  
4200-135 Porto  
Portugal  
+351 220 408 800  
info@i3s.up.pt  
[www.i3s.up.pt](http://www.i3s.up.pt)



microbial communities. In fact, a combined analysis of the host transcriptome and microbial signatures demonstrated that genes related to host defense response are upregulated in subjects with altered or more abundant microbiome. This overexpression is maintained overtime in subjects experiencing disease progression, suggesting that the bacterial communities of the lower airways may induce persistent alveolar injury in IPF. However, as compared to IPF, our knowledge on the molecular events underlying other PF-ILDs is minimal, calling for a deeper study of these pathologies.

The current proposal, FIBRA-Lung, aims at filling this void by establishing the first portuguese registry of PF-ILDs, enabling us to study their relative frequency in the region, and to explore the molecular determinants of clinical outcomes, acute exacerbations and mortality. Furthermore, through the parallel creation of a biobank of peripheral blood, bronchoalveolar lavage, pharyngeal swabs and lung tissue, we will analyze the interactions between host and environment in PF-ILDs, through an integrative approach linking the transcriptional profiles and the respiratory microbiome. Through FIBRA-Lung, we expect to gain deeper insight into fibroproliferative common pathways, paving the way for new biomarkers that reflect the progressive phenotype, supporting better treatment options in stratified populations of patients.

## 2. Applicable Legislation

- Decree-Law no. 57/2016 of 29 August, amended by Law 57/2017 of 19 July, which approved the doctorate hiring regime destined to stimulate scientific and technological employment for all knowledge areas (RJEC)
- Labour Code, Law no. 7/2009 of 12 February, on its current draft
- Regulatory Decree Nr 11-A / 2017, of 29th December.

## 3. Pursuant to article 13 of RJEC, the tender selection panel shall be formed by:

President: Helder Novais e Bastos; Other members: Margarida Saraiva; Maria Salomé Gomes.

**4. Workplace** shall be at i3S, Rua de Alfredo Allen, 208, Porto, research group *Immune Regulation*. Whenever convenient according to the tasks involved, the researcher may have to use the facilities of the University Hospital São João and Faculdade de Medicina da Universidade do Porto, Alameda Prof. Hernâni Monteiro, 4200-319 Porto.

**5. Monthly remuneration** to be paid is the remuneration set by subheading a) nr.1 article 15 of RJEC and article nr 2 of the Regulatory Decree nr. 11-A/2017, corresponding to level 33 of the Tabela Remuneratória Única, approved by Order no. 1553-C/2008 of December 31st, i.e. 2.134,73 Euros, with the category of Junior Researcher.

6. Any national, foreign and stateless candidate(s) holding a doctorate degree in Health and Life Sciences or related scientific area and a scientific and professional curriculum whose profile is suited for the activity to be performed can submit their applications. In the event the doctorate degree was awarded by a foreign higher education institution, said degree must comply with the provisions of Decree-Law no. 341/2007 of 12 October, and all formalities established therein must be complied with at the signature of contract.

7. The tender **admission specific responsibilities and requirements** are described below.



### **Main position responsibilities:**

- Administrative management of the research project, including liaising with health staff (doctors, nurses, health technicians), investigators and other collaborators, managing clinical and research data, biological samples collection, transportation, processing and storing;
- Participate at laboratory tasks;
- Assist with the writing of yearly reports and manuscripts;
- Ensure that the content of the project's website is well-structured and updated while the project evolves;
- Develop, implement and manage the project's social media strategy.

### **Qualifications and experience requirements**

- Highly motivated candidates with Post-Doc experience in Biomedical Sciences or a related discipline;
- Knowledge of clinical research process and medical terminology;
- Broad and detailed hands-on experience with molecular tools, including DNA/RNA extraction and analysis, immunoassays, cell culture and cell-based assays;
- Experience in project management and liaising with a multidisciplinary team;
- Knowledge of advanced statistical analysis is desirable;
- Proven experience in monitoring clinical data preferred; experience in clinical trials is a plus;
- Ability to reason independently and recommend specific solutions in clinical settings;
- Strong written and verbal communication skills in Portuguese and English;
- Relevant publication track record in international peer-reviewed journals, preferably in clinical and translational research in respiratory field;
- Good teamwork and interpersonal skills;
- Immediate availability to start the contract, with a maximum duration of 24 months.

### **8. Pursuant to article 5 of RJEC, selection is to be made based on candidate **scientific and curricular career evaluation**.**

Scientific and curricular career evaluation focuses on relevance, quality and in line with the current state-of-the-art:

a) of scientific and technological production in the last five years, deemed most relevant by the candidate;

b) of research activities, applied or based on practical work, developed in the last five years, deemed most impactful by the candidate;

c) of knowledge extension and dissemination activities developed in the last five years, namely under the scope of the promotion of culture and scientific practices, deemed most relevant by the candidate.



9. The five-year period mentioned above can be extended by the panel, if requested by the candidate, whenever the suspension of scientific activities is reasoned by socially protected grounds like paternity leave, long-term serious illness, and other legal situations of unavailability to work.

**10. Evaluation criteria** are the following:

a) Detailed Curricula (75%):

- Relevant research experience in the scientific area of the application (50%)
- Scientific and technological production, including oral/poster communications, publications and impact factors (15%)
- Participation in clinical trials (10%)

b) Motivation Letter (25%)

- Interest and motivation for the research area framing the position to be hired.

11. With the purpose of further clarification regarding the curricular elements presented, the candidates can be selected for an interview. In this case, for the interviewed candidates, the first component of the evaluation will be valued in 80% (detailed Curricula 60% and motivation letter 20%) and the interview will be valued in 20%.

12. Candidate final classification system shall be given based on a scale 0-100.

13. The panel shall deliberate by means of roll-call vote justified under adopted and disclosed selection criteria, with no abstentions allowed.

14. Minutes of panel meetings shall be executed and shall include a summary of all occurrences of said meeting, as well as of all votes casted by the members and respective reasoning, and shall be provided to candidates whenever required.

15. After selection criteria application, the panel shall prepare a sorted list of approved candidates and respective classification.

16. Panel's decision shall be validated by the leader of the institution, who is also in charge of deciding about the hiring.

17. **Applications** shall include all supported documents proving the conditions encompassed by section 7 and 8 for tender admission, namely:

- a) Certificate or diploma copy;
- b) *Curriculum vitae*, detailed and structured pursuant to sections from 7 to 10;
- c) Other documentation relevant for the evaluation of qualifications in a related scientific area;
- d) A recommendation letter from previous supervisor(s) from a research Project in which the candidate participated.

Candidates shall submit their application filing I the required information and supporting documentation, in a digital form, in PDF format, **from the 9th April 2021 to the 30th April 2021** through the link:



[https://dozer.i3s.up.pt/applicationmanagement/#/addapplications/ResearcherFCT\\_PROJ2020i3S09042021](https://dozer.i3s.up.pt/applicationmanagement/#/addapplications/ResearcherFCT_PROJ2020i3S09042021)

**18.** All candidates who formalize their applications in an improper way or fail to prove the requirements imposed by this tender are excluded from admission. In case of doubt, the panel is entitled to request any candidate to present further documentation supporting their statements.

**19.** False statements provided by the candidates shall be punished by law.

**20.** Both admitted and excluded candidate list and final classification list shall be published in the website of the Institute and the selected candidate shall be notified by email.

After publication of the results, candidates shall have 10 working days to comment. Within 90 days following the deadline for the submission of applications, the final decisions of the jury shall be disclosed on the i3S website, [www.i3s.up.pt](http://www.i3s.up.pt).

The expected starting date is **1st June 2021**.

**21.** This tender is exclusively destined to fill this specify vacancy and can be terminated at any time until approval of final candidate list, expiring with the respective occupation of said vacancy.

**22.** Non-discrimination and equal access policy: i3S actively promotes a non-discrimination and equal access policy, wherefore no candidate can be privileged, benefited, impaired or deprived of any rights whatsoever, or be exempt of any duties based on their ancestry, age, sex, sexual preference, marital status, family and economic conditions, instruction, origin or social conditions, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, origin territory, language, religion, political or ideological convictions and union membership.

**23.** Pursuant to Decree-Law no. 29/2001 of 3 February, disabled candidates shall be preferred in a situation of equal classification, and said preference supersedes any legal preferences. Candidates must declare, on their honour, their respective disability degree, type of disability and communication/expression means to be used during selection period on their application form, under the regulations above.

**24.** The panel has approved this announcement in meeting held on 5th April 2021.