

## ANNOUNCEMENT OF AN INTERNATIONAL CALL FOR THE SELECTION OF A PhD STUDENT

**Internal Code: PhD\_Student/Marie Curie/i3S/0203/2026**

A call is opened for the position of a PhD Student, for a period of 3-years, to carry out research duties within the European Marie Skłodowska-Curie Actions (MSCA) Doctoral Network "GLYCOCALYX-Self-organisation and barrier functions of the mammalian glycocalyx – Training glycoscientists across disciplines and borders to stimulate new approaches, understanding and biomedical applications". The position is funded by the European Union's Horizon Europe Research and Innovation programme, under Grant Agreement No 101227305.

Are you passionate about understanding how the immune system regulates the mucosa immune response, distinguishing self from non-self? Are you excited by the idea that complex sugar molecules (glycans) on mucosa surface (Mucosal Glycocalyx) encode critical information that shapes immune tolerance, infection susceptibility, and disease onset? Do you want to pursue a PhD within a prestigious Marie Skłodowska-Curie Doctoral Network while working at one of Europe's leading health research institutes, in a vibrant research group specialized in Glyco-Immunology? We are offering a 36-month fully funded PhD Fellowship within the MSCA Doctoral Network GLYCOCALYX, hosted at i3S – Instituto de Investigação e Inovação em Saúde, University of Porto, at Salomé Pinho's lab.

**Scientific Area:** Immunology, Biochemistry, Glycobiology, Carbohydrates, Biophysics

### 1. Project summary and work plan

GLYCOCALYX (<https://www.glycocalyx.org/>) brings together 15 leading European partners in a transnational network, implementing a multidisciplinary and intersectorial research and training programme between the academic and industrial partners, to research the self-organisation and barrier functions of the mammalian glycocalyx.

Virtually all mammalian cells are covered with a dense and complex coat of sugar chains (glycans) known as the glycocalyx, which is essential for multicellular life. Glycocalyxes accomplish critical functions in inter-cellular communication, controlling tissue development, homeostasis and repair, inflammatory and immune responses, neuronal connectivity, and symbiosis with bacteria. However, when dysregulated, they can promote immune diseases, neurodegeneration and cancer. Glycocalyxes also act as the first line of defense against pathogens, but some pathogens have evolved to hijack the glycocalyx to promote infection.

Despite their importance, mammalian glycocalyxes remain the 'dark matter' of biology, under-studied owing to the historical lack of preparative and analytical tools to probe the local molecular composition and transient interactions of molecules within glycocalyxes, and missing physics rules to interpret experimental observations.



Funded by  
the European Union



INSTITUTO  
DE INVESTIGAÇÃO  
E INOVAÇÃO  
EM SAÚDE  
UNIVERSIDADE  
DO PORTO

Rua Alfredo Allen, 208  
4200-135 Porto  
Portugal  
+351 226 074 900  
info@i3s.up.pt  
[www.i3s.up.pt](http://www.i3s.up.pt)

The GLYCOCALYX Network will train 15 PhD Fellows in chemistry, glycobiology, immunology, physics and biology methods and concepts required to resolve the dynamic organisation of glycocalyxes. The project will establish a new level of understanding of how glycocalyxes perform their many selective barrier functions. The PhD Fellows will receive cutting edge scientific training, alongside industry-relevant transferable skills, to equip them for careers in the medical technology sector and its underpinning research and innovations.

**1.1 PhD Student Individual Research Project: “The mucosal glycocalyx and the host-microorganism relationship in homeostasis and infection”**

Glycans are essential components of our immunological identity, fundamental for the discrimination between self and non-self, which relies on glycan recognition by glycan-binding proteins (lectins, antibodies) expressed or secreted by immune cells. The importance of the mucosal glycocalyx in the relationship between microorganisms – commensal or pathogenic – and their host, and most notably in the regulation of the host immune system, has only recently become appreciated. We are currently unable to decipher how the vast information displayed by the mucosal glycocalyx, and its spatiotemporal regulation in health and in infection/inflammation, define the magnitude, the nature and the fate of immune responses both in homeostasis and in disease.

**1.2 Objectives**

Specific aims:

- 1) Investigate how mucosal glycocalyx composition and spatial organization define the mucosal microenvironment, i.e., interactions with the microbiome and the immune system;
- 2) Investigate how glycan recognition by selected glycan binding host proteins impacts homeostasis and immunological tolerance;
- 3) Investigate how changes in mucosal glycocalyx composition/organisation define host-microorganisms relationship leading to a modulation of the immune response and disease onset.

The project will benefit from expertise in glycoimmunology with access to unique glycoengineered *in vitro*, *ex-vivo* and *in-vivo* models and human samples, glycomics, microscopy and glycocalyx labelling tools. The selected candidate will interact and develop research collaborations within the GLYCOCALYX academic and industrial partners, and in addition you will participate in activities of the Doctoral Network, including attending training courses and secondments at other sites.

The project will be conducted at the Immunology, Cancer & GlycoMedicine group of i3S (<https://www.i3s.up.pt>). For more information on the host lab at i3S, please visit Pinho’s lab: <https://pinholab.i3s.up.pt/>. Secondments are planned at partner institutions in the UK and Sweden.

The successful candidate will be enrolled in a PhD program at the Instituto de Ciências Biomédicas Abel Salazar (ICBAS), University of Porto.



Funded by  
the European Union



### 1.3 Main Responsibilities

- a) Manage and carry through the research project;
- b) Participate in the training and network activities planned with the GLYCOCALYX network;
- c) Write scientific articles and PhD thesis;
- d) Participate in national and international congresses and scientific meetings;
- e) Research stays at external research laboratories (secondments) within the GLYCOCALYX network;
- f) Disseminate research.

### 1.4 Additional Information

**Host lab:** This position will be based in Pinho's Lab at the **Instituto de Investigação e Inovação em Saúde (i3S) - University of Porto**, a multidisciplinary research institute dedicated to excellence in health sciences research and innovation. i3S brings together scientists across thematic areas including cancer, immunology, infection, regeneration and neurobiology to tackle major challenges in human health at the highest international level.

**Pinho's Lab**, part of the **Immunology, Cancer & GlycoMedicine** research group, focuses on understanding how glycans regulate immune responses in contexts such as chronic inflammation, autoimmunity and cancer, and aims to translate these insights into novel biomarkers and therapeutic strategies. The lab is located within i3S, where state-of-the-art facilities support interdisciplinary research and collaboration across biomedical sciences.

The selected candidate will collaborate closely within the research group of Pinho's lab and with other partners from the GLYCOCALYX DN (<https://www.glycocalyx.org/>) working on complementary aspects of immunology, glycobiology, glycomedicine and translational science.

**MSCA Doctoral Networks:** Find out more about the Horizon Europe Marie Skłodowska-Curie Actions (<https://marie-sklodowska-curie-actions.ec.europa.eu/>), the European Union's flagship funding programme for doctoral education and postdoctoral training of researchers, and about MSCA Doctoral Networks (<https://marie-sklodowska-curie-actions.ec.europa.eu/actions/doctoral-networks>).

### 1.5 Supervision

The principal supervisor will be Prof. Salomé Pinho; phone: +351 226 074 900; email: [salomep@i3s.up.pt](mailto:salomep@i3s.up.pt)

### 2. Applicable Portuguese legislation

Portuguese Labor Code, in its current wording.

### 3. Jury

Chairman: Salomé Pinho, PhD (i3S); Other Members: Daniel Spencer, PhD (Ludger), and Inês Alves, PhD (i3S). Substitute: Vanda Pinto, PhD (i3S).



#### 4. Workplace

i3S - Rua de Alfredo Allen, 208 Porto, research group *Immunology, Cancer & GlycoMedicine*.

#### 5. Professional category and monthly remuneration

PhD Student Researcher

Gross salary: fixed at €2,310 per month, paid 14 times per year, in accordance with Portuguese labour law.

Mobility allowance: €580 per month.

Family allowance: €400 per month may apply depending on eligibility and presentation of official evidence.

The salary and allowances are subject to taxes and other mandatory deductions under Portuguese legislation.

The terms of employment and salary are in accordance with the local and national rules and in accordance to the rules and regulations laid down by the European Union's Horizon Europe Marie Skłodowska-Curie Action Doctoral Network. Exact salary will be confirmed upon appointment.

#### 6. Obligatory requirements for admission

##### Mandatory:

- a) The successful candidate must hold a Bachelor and a MSc degree or equivalent in Biology, Biochemistry, Medicine, or another related field in Health and Life Sciences with very good scores. Certificates are mandatory. At the date of recruitment, the researcher must not be in possession of a doctoral degree;
  - i. Must also submit a short summary of the MSc thesis with major activities and achievements (max 1 page);
- b) Not have resided or carried out main activity (such as work or study) in Portugal for more than 12 months in the last 36 months immediately prior to the recruitment date (proof may be requested);
- c) Two letters of recommendation;
- d) Submission of a motivation letter in English;
- e) Excellent knowledge of the English language (spoken and written / proficiency level).

##### Preferential:

- a) Proven research experience in immunology, protein biochemistry, glycosylation/glycobiology, and/or biochemistry;
- b) Experience in some of the following methods: cell culture, immune-assays, microscopy, flow cytometry, animal experimentation and relevant molecular biology techniques.



**Mobility Rule:** researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting beneficiary (Portugal) for more than 12 months in the 36 months immediately before their date of recruitment. Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account. Date of Recruitment means the first day of the employment of the researcher for the purposes of the action (i.e., the starting date indicated in the employment contract).

### 7. Evaluation of the applications and publication of the results

The recruitment process will follow the principles of the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers: <https://euraxess.ec.europa.eu/jobs/charter-code-researchers>.

Weight of the different curricular evaluation criteria:

- A) Detailed CV (60%);
- B) Motivation letter in English (10%);
- C) Interview (30%).

The 3 (three) best candidates classified on the basis of the curriculum and motivation letter will be called for an interview.

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 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) Detailed Curriculum Vitae;
- b) Diploma and transcripts of records: Bachelor and Master's degree diploma (including grade transcripts for bachelor's and master's degrees). Applicants with a Bachelor/Master's degree from abroad should also enclose a short description of the grading scale used;
- c) Short summary of the MSc thesis with major activities and achievements (max 1 page);
- d) Motivation letter in English: Letter stating the interest in and qualifications for the project (max. one page);
- e) Honour Statement declaring that the candidate has not resided or carried out main activity (such as work or study) in PORTUGAL for more than 12 months in the last 36 months immediately prior to the recruitment date;
- f) Two letters of recommendation including contact details for references.

The submission of applications is digital, in pdf format, from 02/03/2026 to 30/03/2026, in the following link:

<https://dozer.i3s.up.pt/applicationmanagement/#/addapplications/ed9d7f418799cd5c88289d068e1e1>

## 9. Start and duration of the contract

The expected start date of the contract is September 2026 (exact date to be confirmed). The contract may only start on formal admission and enrolment in a PhD program at ICBAS, University of Porto. The maximum duration of the contract will be 36 months.

## 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



Funded by  
the European Union



INSTITUTO  
DE INVESTIGAÇÃO  
E INOVAÇÃO  
EM SAÚDE  
UNIVERSIDADE  
DO PORTO

Rua Alfredo Allen, 208  
4200-135 Porto  
Portugal  
+351 226 074 900  
info@i3s.up.pt  
[www.i3s.up.pt](http://www.i3s.up.pt)



disability and the means of communication/expression to be used in the selection process, under the terms of the aforementioned decree.



Funded by  
the European Union



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

Rua Alfredo Allen, 208  
4200-135 Porto  
Portugal  
+351 226 074 900  
info@i3s.up.pt  
[www.i3s.up.pt](http://www.i3s.up.pt)