



Universidade Nova de Lisboa
Instituto de Tecnologia Química e Biológica António Xavier (ITQB NOVA)

Notice
Recruitment and hiring procedure for a PhD holder
Reference 010/TRI-PhD/Shield/2025

It is made public that by order of the Dean of the *Instituto de Tecnologia Química e Biológica António Xavier da Universidade NOVA de Lisboa* (ITQB NOVA), issued on 7th February 2025, the opening of an international selection procedure was authorized under the regime for contracting PhD holders (Decree-Law No. 57/2016, of 29 August, amended by Law No. 57/2017, of 19 July, in its current wording), to fill a position for a PhD holder, in the scope of the research project entitled “Molecular strategies against viral entry and glycan shielding”, acronym SHIELD, with the reference 101191794, funded by the Horizon Europe Programme, specifically through the HORIZON-HLTH-2024-DISEASE-08 call.

The PhD candidate to be hired will conduct research work as part of the project's development, which has a duration of five years.

Working place:

The work will be carried out at the ITQB NOVA facilities, located at Avenida da República, Oeiras, without prejudice to any potential travel and stays related to the duties to be performed and activities to be developed.

Academic qualifications:

PhD in Computational Biology, Structural Bioinformatics, Chemistry, Biochemistry, Biophysics or related areas.

General requirements:

- 1) PhD in the scientific areas mentioned above;
- 2) Proficiency in English, written and spoken.

Specific requirements:

- 1) Experience in the application of molecular simulation methods to the study of proteins demonstrated in articles published in scientific journals;
- 2) Experience in LINUX operative systems;
- 3) Experience in developing scripts using Bash and Python programming languages.

Skills to be valued:

- 1) Strong motivation to conduct scientific research;
- 2) Ability to work autonomously;
- 3) Strong organizational, communication and teamwork skills;
- 4) Strong critical thinking and problem-solving skills;
- 5) Experience in advanced simulation methods, including protein design and enhanced sampling methods, is valued but not mandatory.

**Work plan:**

The successful candidate will integrate the highly multidisciplinary consortium of the SHIELD project, which aims to bring a paradigm shift in therapeutic strategies for targeting devastating virus families such as *Arenaviridae* (Lassa), *Paramyxoviridae* (Nipah/Hendra) and *Flaviviridae* (West Nile virus, Zika, dengue, and yellow fever) that are responsible for millions of infections globally.

The candidate will develop computational pipelines, based on molecular dynamics simulations, enhanced sampling simulations and Artificial Intelligence (AI)-based methods to study the effect of glycan shielding of the fusion proteins belonging to viruses of the *Flaviviridae*, *Arenaviridae* and *Paramyxoviridae* families, analyze the proteins' conformational dynamics and identify hidden epitopes that may be targeted by antiviral strategies.

Additionally, the candidate will also implement a platform for the computational design of nanobodies to target viruses belonging to the *Flaviviridae*, *Arenaviridae* and *Paramyxoviridae* families, as well as the characterization of their biological behavior through molecular dynamics simulation. The candidate will also interface with experimental researchers that will further exploit and validate the computational results, enabling a continuous refinement of the *in silico* approach.

Category and applicable law:

- PhD holder, Level 33 of the Single Retributive Table (TRU), in accordance with Regulatory Decree No.11-A/2017, of 29 December.
- Employment contract for an uncertain term, according to the article 18 and paragraphs 1(b) and 3 of article 6 of the Decree-Law No. 57/2016, of August 29, amended by Law No. 57/2017, of July 19, under the legal terms in force. The contract is expected to start in April 2025.
- If the doctoral degree has been awarded by a foreign higher education institution, it must comply with the provisions of Decree-Law No. 66/2018, of August 16, and any formalities established therein must be fulfilled by the date of signature of the employment contract.

Documents required in the application:

- Detailed *Curriculum vitae*;
- Motivation letter;
- Contact of two references;
- PhD certificate.

Selection methods and definition of respective weightings:

- Curricular Assessment (CA), through the evaluation of the *curriculum vitae* and the motivation letter – 90%
- Selection Interview (SI) – 10%

The final classification will be expressed on a scale of 0 to 20, resulting from the application of the following formula: Final classification = 90% * AC + 10% * ES

Candidates will be ranked according to their classification in the Curriculum Evaluation, and the top three candidates with the highest classification in this parameter will be invited for an interview, provided their score is equal to or greater than 16. Candidates will also be classified on a scale from 0 to 20 in the Selection Interview. If the position is not filled, the next three highest-ranked candidates according to the ranking list may be called.

ITQB NOVA reserves the right not to proceed with the hiring if no candidate(s) with the appropriate profile is(are) found.

Composition of the Selection Committee:



- Professor Cláudio M. Soares, ITQB NOVA (President)
- Doctor Diana Lousa, ITQB NOVA (Effective member)
- Doctor Manuel N. Melo, ITQB NOVA (Effective member)
- Doctor António M. Baptista, ITQB NOVA (Substitute member)

Deadlines for applications:

The application deadline is 15 working days and runs from 26th of February 2025 and 28th of March 2025 (**new deadline**), inclusive.

Submission of applications:

All documents should be sent as a **single PDF file**, by email to **concursos@itqb.unl.pt**, indicating the **Reference 010/TRI-PhD/Shield/2025** in the subject.

Notification of results:

All candidates will be informed of the competition decisions by e-mail.

Non-discrimination and equal access policy:

ITQB NOVA actively promotes a policy of non-discrimination and equal access, whereby no candidate may be privileged, benefited, prejudiced or deprived of any right or exempt from any duty on basis of, inter alia, 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 and trade union membership.

In terms of Decree-Law No. 29/2001, of February 3, the disabled candidate has preference in equal classification, which prevails over any other legal preference. Candidates must declare in the application form, under oath, their 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 aforementioned diploma.

The full notice of this recruitment procedure will be available
at <https://euraxess.ec.europa.eu/>
and on the ITQB NOVA website <https://www.itqb.unl.pt/jobs/>

Oeiras, 25th February 2025

The Dean of ITQB NOVA,
Professor João Paulo Serejo Goulão Crespo