CALL FOR GRANT APPLICATIONS

(AE2026-0142)

INESC TEC is now accepting grant applications to award 1 Research Grant (BI) within the scope of the within the scope of the project eSPRcancer with reference 15242 (COMPETE2030-FEDER-00890700) co-funded by the ERDF - European Regional Development Fund through Innovation and Digital Transition Program - COMPETE 2030 under the scope of Portugal 2030 and by National Funds through the FCT - Fundacao para a Ciencia e a Tecnologia, I.P. (Portuguese Foundation for Science and Technology).

1. GRANT DESCRIPTION

Type of grant: Research Grant (BI)

General scientific area: PHYSICS,TECHNOLOGY,CHEMISTRY

Scientific subarea: Nanotechnology,Analytical chemistry,Applied physics,Electromagnetism

Area of Work: Optoelectrochemical systems applied to biosensors.

Grant duration: 6 months, starting on 2026-07-01, with the possibility of being renewed for a maximum term of one year, in cases where the grant has been awarded to students who are enrolled in non-award courses, or up to two years, in the cases of students enrolled in a master's degree.

Scientific advisor: João Pedro Mendes

Workplace: FCUP - Faculdade de Ciências da Universidade do Porto

Maintenance stipend: € 1090.98, **according to the table of monthly maintenance stipend for FCT grants**, paid via bank transfer. Grant holders may be awarded potential supplements, according to a quarterly evaluation process (Articles 19, 21 and 22 of the **Regulations for Grants of INESC TEC** and Annex II), up to a maximum limit of 50% of the monthly maintenance stipend.

INESC TEC supports costs with registration, enrolment or tuition fees, during the grant duration, under the terms established in the internal document: **Payment of Tuition fees to grant holders**.

The grant holder will benefit from health insurance, supported by INESC TEC.

2. OBJECTIVES:

Design and development of a bimodal optoelectrochemical sensing platform integrating plasmonic optical transduction and electrochemical detection.

Fabrication and functionalisation of sensing interfaces for the selective recognition of cancer biomarkers.

Optimisation of optical (plasmonic) and electrochemical measurement conditions to maximise sensitivity, selectivity, and reproducibility.

Analytical validation of the developed system, including evaluation of key performance parameters (LOD, LOQ, etc).

Demonstration of the system’s functionality and versatility using relevant cancer biomarkers.

3. BRIEF PRESENTATION OF THE WORK PROGRAMME AND TRAINING:

Early detection and effective monitoring of cancer biomarkers are essential to improve clinical prognosis, support therapeutic decision-making, and increase patient survival rates. In this context, the development of bimodal systems integrating optical techniques, particularly plasmonics, with electrochemical transduction represents an innovative and highly promising approach for the sensitive detection and quantification of cancer biomarkers. Within this framework, the candidate will have the opportunity to develop and validate an optoelectrochemical system, critically assessing its functionality and versatility for such applications.

4. REQUIRED PROFILE:

Admission requirements:

Bachelor's in Physics Engineering.
The awarding of the fellowship is dependent on the applicants' enrolment in study cycle or non-award courses of Higher Education Institutions.

Preference factors:
Experience in the fabrication and/or functionalisation of surfaces for chemical or biological sensing applications.

Familiarity with nanomaterials and their application in optical or electrochemical sensing.

Experience in data analysis and signal processing.

Minimum requirements:
Strong knowledge of electrochemical techniques applied to chemical sensors or biosensors.
Demonstrated experience or knowledge of optical techniques, preferably in plasmonics or optical detection methods.
Experience in the fabrication of thin films by sputtering.
Experience in the fabrication of thin films by electrodeposition.

5. EVALUATION OF APPLICATIONS AND SELECTION PROCESS:

Selection criteria and corresponding valuation: the first phase comprises the Academic Evaluation (AC), based on the criteria referred to in Article 12 of the **Regulations for Grants of INESC TEC**, while the second phase comprehends the Individual Interview (EI). All factors are evaluated on a scale of 0 to 100, taking into account the applicants' merit, suitability and conformity with the preference factors.
The weight of the AC factors are as follows: Academic Qualifications (FA, 30%), Scientific Publications (PC, 30%), Experience (EX, 20%) and Motivation Letter (CM, 20%).
Candidates who score less than 50 points in the AC average will be considered excluded on absolute merit. The top five candidates approved on absolute merit will be qualified for the individual interview. The Final Grade (CF) is obtained by the weighted average of AC (70%) and EI (30%).

DISABILITY INCENTIVE

Candidates who present a degree of disability equal to or greater than 90% will benefit from an incentive (20) in the score of the CV Assessment.
Candidates who present a degree of disability equal to or greater than 60% and less than 90% will also benefit from an incentive (10) in the score of the CV Assessment.
Said score may, in these cases, exceed 100 points.
Candidates must demonstrate the degree of disability during the application, namely through the submission of the Multi-Purpose Medical Certificate of Disability, issued in accordance with Decree-Law no. 202/96, of October 23 currently in effect.
Candidates must declare, in the application form, the type of disability used throughout the selection process, in order to proceed with the required adaptations.

The Selection Jury is composed of the following members:
President of the Jury: João Pedro Mendes

Full member: Luís Carlos Coelho
Full member: José Ribeiro
Substitute member: José Almeida

Release of results and prior hearing: the results of the selection process, as well as the terms and procedures for prior hearing, will be released to the applicants by email, under the terms referred to in Article 13 of the Regulations for Studentships and Fellowships of INESC TEC.

6. FORMALISATION OF APPLICATIONS:

Application Documents:

1. Motivation letter;
2. Curriculum Vitae (must include the list of previous fellowships, their type, beginning and end dates, funding entities and host institutions);
3. Certificate or diploma degree;
4. Proof of enrollment in a degree awarding study cycle or in a non degree awarding Higher Education program.
    - The proof of enrollment may be presented just during the grant hiring stage.
5. Signed declaration stating the infringement of the grant holder's duties (article 14, no. 4)
6. Documental evidence to support the country of residence, residence permit or other legally equivalent document, in cases where the applicant is a foreigner or non-resident in Portugal - valid until the beginning of the grant.
7. Other supporting documents relevant to the final assessment.

Failure to deliver the required documents within the 90-day period after the date of the notice of the conditional awarding of the grant implies its cancellation.

Application period: From 2026-05-21 to 2026-06-03

Submission of applications: the application will be formalised by submitting the form available in the *Work With Us* section of INESC TEC website.

7. BINDING LEGISLATION AND REGULATION

The hiring process shall comply with the current legislation regarding the Research Grant Holder Statute, approved by Law no. 40/2004 of August 18, in its current wording, as well as by the **Regulations for Grants of INESC TEC** and for **FCT Grants Regulation in force**.

For more information, please check the **Regulations for Grants of INESC TEC** and relevant annexes at www.inesctec.pt/bolsas