
INPhINIT – “la Caixa” Doctoral Fellowships

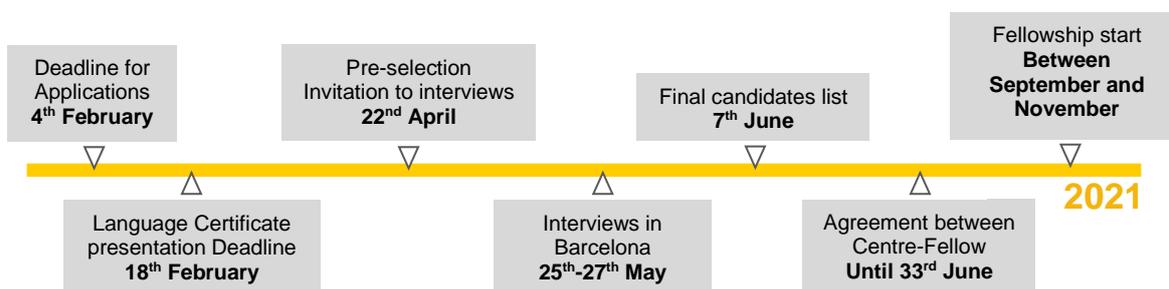
About INPhINIT - Incoming

INPhINIT Incoming is a doctoral fellowship programme devoted to attracting international Early-Stage Researchers (ESRs) to the top research centers in the areas of Bio and Health Sciences, Physics, Technology, Engineering and Mathematics in Spain and Portugal. **INPhINIT** is promoted by the "la Caixa" Foundation with the aim of supporting the best scientific talent and fostering innovative and high-quality research by recruiting outstanding international students and offering them an attractive and competitive environment for conducting research of excellence.

In this call, **35 Early-Stage Researchers of any nationality**, will enjoy a 3-year employment contract at the Research Centre of their choice among those selected and awarded by the Spanish Ministry of Economy and Competitiveness ("Severo Ochoa" centres of excellence and "Maria de Maeztu" units of excellence) and the Spanish Ministry of Health ("Carlos III centres of excellence"), and units considered to be excellent and exceptional by the Foundation for Science and Technology in Portugal participating in this programme.

INPhINIT Incoming 2021 Timeline

This call is now OPEN!



More info about the [Application rules](https://fundacionlacaixa.org/en/la-caixa-foundation-doctoral-inphinit-fellowships-incoming) and what it offers at: <https://fundacionlacaixa.org/en/la-caixa-foundation-doctoral-inphinit-fellowships-incoming>

Our Project

Links between Cancer Metabolism and Cancer Immunology and therapy

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<https://idibell.cat/en/research/cancer-area/molecular-mechanisms-and-experimental-therapy-in-oncology-program-oncobell/cell-death-and-metabolism/>

Institut d'Investigació Biomèdica de Bellvitge (IDIBELL)

www.idibell.cat

Bellvitge Biomedical Research Institute (IDIBELL) is a research centre focused on cancer, neurosciences and translational medicine, in which high quality biomedical research takes place with the aim of benefitting people's health and promoting economic development. This joint research initiative was set up as a legal entity in 2004 by the Bellvitge University Hospital, the Catalan Institute of Oncology, the University of Barcelona, The City Council of L'Hospitalet, the Catalan Institute of Health and the Generalitat of Catalonia.

IDIBELL manages the research activities of researchers at the University Hospital of Bellvitge (HUB), the Catalan Institute of Oncology (ICO-Hospitalet), the University of Barcelona-Bellvitge Campus (UB), and Viladecans Hospital (HV). The institute is located south of Barcelona, in L'Hospitalet de Llobregat. A key aspect of IDIBELL's research is its proximity to the patient due to its location and daily clinical activity of many of its researchers. The real proximity between both excellent clinicians and basic researchers has made translational research a reality in IDIBELL.

In 2009, IDIBELL became one of the first five Spanish research centres accredited as a health research institute by the Institute of Health Carlos III (ISCIII) and it is currently one of the most productive biomedical research institutions in Spain. It is also a member of the Campus of International Excellence of the University of Barcelona HUBc and of the CERCA institution of the Generalitat of Catalonia.

IDIBELL has a total laboratory area of 5000 sq m, including shared core facilities to carry out experiments requiring genomic and proteomic analysis, animal facilities, a Clinical Trial unit

(UCICEC), a Bioinformatics and statistics unit and a Biobank. In addition to the excellent scientific facilities available, IDIBELL offers researchers a strong network of support departments, such as a Research Support Office, an Innovation and Technology Transfer Office, a Communications & Outreach Department and a Human Resources Department. Each department counts on experienced personnel in the relevant area and can be counted on to assist the researcher with the successful implementation of the project.

ADDRESS

Gran Via de l'Hospitalet, 199, 08908 Hospitalet de Llobregat, Barcelona

PROJECT

Cancer cells are subjected to nutritional stress and hypoxia due to their uncontrolled growth. In addition, they display alterations in their metabolism, caused directly by oncogenic transformation. Metabolic peculiarities of cancer cells are prompting the development of novel therapies that target the Warburg effect. Cancer cells are so avid of some nutrients like glucose that they deprive their microenvironment of these nutrients. Additionally, their surrounding milieu is full of metabolic products like lactate that affect the tissue.

Our group has recently found that starvation associated with the nutritional microenvironment promotes cell death, but it also stresses the tumor cells in a manner that they secrete paracrine signals (cytokines) that affect the stroma and the immune system (Püschel [et al] and Muñoz-Pinedo, PNAS 2020). Understanding this dialog between the tumor cells and other tissues is relevant to understand not only how cancer develops, but also **how to improve anti-metabolic therapies and immunotherapy**.

The candidate would test a **combination of basic and therapy-oriented hypothesis aimed to understand how the nutritional microenvironment regulates cancer survival and its crosstalk with the immune system**.

The Cell Death and Metabolism Group at IDIBELL is focused on understanding how cells die when they lack essential nutrients and how they communicate with the tissue. The aim is to use this knowledge to develop better therapies for lung cancer treatment and mesothelioma, or against ischemic diseases such as stroke. We are an international group with numerous local and international collaborations in the fields of cell death, the immune response and cancer metabolism. In addition, we collaborate closely with clinicians to translate our research into actual therapeutic benefit and test our hypothesis in cancer patients (recently awarded La Marató de TV3 project).

Job position description:

We are looking for a student interested in looking at one problem from different angles. A student curious about how cells and organisms work. Background in immunology, cancer and/or signal transduction is preferred.

In this project, the candidate would investigate the molecular mechanisms of protein regulation that occur when lung cancer cells are depleted of specific nutrients, and when these cells are treated with anti-metabolic drugs. She/he will study regulation of molecules that are secreted from the tumor cells and which have an effect on the immune system. She/he will identify ways to interfere with metabolic and stress signaling pathways to improve immunotherapy of lung cancer.

Candidate requirements: Degree in Life Sciences. Qualifications for work with murine models and experience in tissue culture are desirable but not essential.

The candidate would perform a series of biochemical techniques including mRNA analysis (qPCR), promoter analysis by CHIP, techniques to analyze cell death, analysis of secreted proteins (ELISA), Western blot, microscopy, siRNA and/or CRISPR, and possibly experiments in immunocompetent animal models. The candidate is expected to be able to work independently but supervised, and to be willing to present the work at local and international conferences.

RELATED LINK TO THE POSITION

<http://metacan.eu>

**Look for our project
and Apply here**
<https://finder.lacaixafellowships.org/finder>