Post-doctoral position available

**Links between Cancer Metabolism and Cancer Immunology and therapy**

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**PROJECT**

Cancer cells are subjected to nutritional stress and hypoxia due to their uncontrolled growth. On the other hand, they display alterations in cancer metabolism; these alterations are caused directly by oncogenic transformation. Metabolic peculiarities of cancer cells are prompting the development of novel therapies that target the Warburg effect and activate starvation signaling pathways (AMPK, mTOR, the Unfolded Protein Response). The aim of these therapies is to promote cell death. However, these therapies, which work in immunodepressed animal models, frequently do not go beyond the stage of clinical trials. One potential reason is that the immune system as well as matrix-remodelling pathways could hamper the efficacy of anti-metabolic drugs and even promote more metastasis, as shown with anti-angiogenic drugs.

Our group has recently found that starvation associated with the nutritional microenvironment promotes effects on cancer cells that would induce paracrine effects on the stroma and the immune system. This 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 cancer works.

**The Cell Death Regulation Group at IDIBELL**

The primary focus of our lab is to understand 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 cancer treatment or against ischemic diseases such as stroke.

**Job position description**

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 identify ways to interfere with metabolic and stress signaling pathways to improve chemo- and immunotherapy of lung cancer.
Candidate requirements: PhD in Life Sciences or similar. Previous experience in cellular and molecular biology techniques. Qualifications for work with murine models and experience in tissue culture are desirable but not essential. Background in immunology, cancer and/or signal transduction is preferred.

What we offer

Temporary full-time contract (1 year duration), with the option (and encouragement) to apply for post-doctoral grants to further extend the position. Salary according with local regulations.

Post-doctoral grants time-line:

If you are interested, please send us your CV and cover letter to: apoptosislab@gmail.com

About Institut d’Investigació Biomèdica de Bellvitge (IDIBELL)

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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.