



Seeking for Marie Curie PostDoc Candidates 2019

Bellvitge Biomedical Research Institute (IDIBELL) is seeking for an excellent PostDoc candidate that is willing to apply for the Marie S. Curie Individual Fellowships 2019.

Institution:

The position is to conduct research at IDIBELL. Its approach to the disease is comprehensive, combining, all in one organization, prevention, care, specialized training and research. We are a center of reference in Catalonia, both in healthcare quality and in research. IDIBELL provides equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, sexual orientation, gender identity, or gender expression.

Department/Unit:

Immune-inflammatory Processes and Gene Therapeutics

Project description:

Title: **Mechanism of action of novel immunomodulatory biologics. Therapeutic potential in autoimmunity**

The present anti-inflammatory and immunosuppressive drugs, in an attempt to restore the immune homeostasis from patients suffering from immune-inflammatory processes such as autoimmune diseases, induce relevant and non-specific adverse events. Thus, to reestablish self-tolerance, novel immunomodulatory agents are needed, with increased potency, selectivity and safety profiles.

We have recently uncovered novel and powerful anti-inflammatory and immunomodulatory activities in the minor isoform of C4BP, C4BP(beta-), and in Factor H (FH) that are not linked to their known function as soluble inhibitors of the complement system. We have shown that both C4BP(beta-) and FH are able to act directly over dendritic cells (DCs) inducing an anti-inflammatory and tolerogenic state in these cells, which are a nexus between innate and adaptive immunity (Olivar et al. (2013) J. Immunol. 190: 2857-72; Olivar et al. (2016) J. Immunol. 196: 4274-90). Therefore, we aim to gain insight into the molecular mechanisms and the applicability of C4BP(beta-) and FH as promising biologic anti-inflammatory, pro-resolving and immunomodulatory agents (Luque et al. (2017) Semin. Cell Dev. Biol. In Press; doi: 10.1016/j.semcd.2017.11.022; Serrano et al. (2018) Front. Immunol. 9: 892).

Our goals are: 1) to identify and to characterize the membrane surface receptor/s responsible for the C4BP(beta-)- and FH-mediated conversion of DCs into a tolerogenic phenotype. This will be achieved through both a novel experimental approach (Ligand Receptor Capture), and through in silico virtual profiling, 2) to analyze the global transcriptional profiles and the signal transduction pathways involved in this conversion towards tolerogenic DCs, and 3) to evaluate the anti-inflammatory and tolerogenic potential of C4BP(beta-) and FH in animal models of autoimmune lupus nephritis (NZB/NZW F1 mice) (already ongoing), DSS-induced colitis and collagen-induced arthritis (CIA).

Requirements:

- Doctoral Degree
- Mobility:
 - o Standard European Fellowships (ST): must not have spent or carried out the main activity (work, studies, etc.) in Spain for more than 12 months between 11th September 2016 and 11th September 2019.
 - o Career Restart Panel (CAR) or Reintegration Panel (RI): must not have spent or carried out the main activity (work, studies, etc.) in Spain for more than 36 months between 11th September 2014 and 11th September 2019.
 - o Global Fellowship (GF): Open to Experienced Researchers (ER) nationals or long-term residents of MS / AC (period of full-time research activity in MS/AC of at least 5 consecutive years) who has not resided or carried out his/her main activity (work, studies, etc.) in the Third Country (TC) for more than 12 months between 11th September 2016 and 11th September 2019.
- Additional skills and knowledge:
 - o We are seeking an enthusiastic, highly motivated, organized and talented candidate with strong commitment to translational research and able to team up with a dynamic, young and multidisciplinary research group. Strong communication skills both written and spoken will be acknowledged.
 - o Fluent English language
- Experience in :
 - o Masters-level degree in Biomedical Science, Biotechnology, Biology, Bioinformatics, Computational biology or related disciplines.
 - o A background in cell culture, molecular and cell biology techniques and, particularly, immunology and proteomics and bioinformatics will be highly considered.
 - o Previous experience in preclinical models and laboratory techniques is desirable.
 - o Knowledge of statistical programming environment (R) is a plus.

Applications:

Highly motivated candidates, please, send complete CV, cover letter and two reference contacts, to preaward@idibell.cat **before 13th June 2019**.