ANNOUNCEMENT REF.: Candidate to apply for the pre-doctoral contracts in the Health Research Training program (PFIS) of the Instituto de Salud Carlos III(ISCIII), AES2023.

EXPRESSIONS OF INTEREST

The **Metabolism and Cancer Group**, led by Dr. Javier A. Menéndez (ICO), is looking for a highly-**motivated candidate to apply for the call for 4-year pre-doctoral contracts** to join the Research line: "Post-translational modifications (PTM) of PD-L1 in cancer immunotherapy: Development of PD-L1 PTM-based therapeutics and pharmacodiagnostic tools (PI22/00297)" funded by the Instituto de Salud Carlos III (ISCIII) under the supervision of Dr. Elisabet Cuyàs.

Brief description of the Research Group

The "Metabolism and Cancer" group, which is part of the the Program Against Cancer Therapeutic Resistance (ProCURE) that the Catalan Institute of Oncology (ICO) develops at the facilities of the IDIBGI at the Parc Hospitalari Martí I Julià in Salt (Girona), adopts the view that cancer diseases are governed by a pivotal regulatory role of metabolic reprogramming, which ultimately determines cell fate decisions, tumor formation, therapy response, and metastatic cancer relapse. The **main research aim** of the recipient group is to develop new preventive and therapeutic anti-cancer strategies based on the aberrant metabolic phenotype of tumor cells. Since its formation the group has published more than 300 original research articles and reviews that accumulate more than 20.000 citations. The group has produced numerous (>50) scientific contributions at national and international congresses (posters, oral presentations), and more than 30 invited lectures.

URL: https://idibgi.org/en/grups/metabolisme-i-cancer/

Project description: PD-L1 post-translational modifications (PTMs) such as glycosylation and palmitoylation are key regulators of PD-L1 immunosuppressive function, efficacy of monoclonal antibodies (mAbs), and the predictive power of PD-L1. The candidate will join our research team to (a) establish how the targeted inhibition of PD-L1 glycosylation and palmitoylation enhances the anti-tumor immune response of T cells using real-time quantitative platforms, (b) to characterize the therapeutic potency of PTM inhibitors in combination with mAbs in immuno-resistant cell models, and (c) to discover and validate novel co-dependencies of PD-L1 with glycosylation/palmitoylation modifier genes using genomic platforms and functional screens withCRISPR/Cas9.

Brief description of the Host Institution

The Girona Biomedical Research Institute Dr JosepTrueta (IDIBGI) is a CERCA research center of the Generalitat de Catalunya whose purpose is to promote, develop, transfer, manage and disseminate biomedical research, scientific and technological knowledge, teaching and training in the areas of life and health sciences, mainly in the Girona area.

The IDIBGI facilities at the Parc Hospitalari Martí i Julià in Salt host part of the research laboratories and personnel who, along with the rest of the researchers from the associated institutions, form multidisciplinary teams with different expertise, focused on finding synergies and solutions to the societal health challenges through translational research.

The IDIBGI gathers 400 researchers, support staff and associate medical doctors from two hospitals (Doctor Josep Trueta University Hospital and Institute for Health Care), the University of Girona, the Institute for Diagnostic Imaging, the Catalan Institute of Oncology and the Primary Care Institute. The research staff are divided into 23 groups framed into 7 different research areas.

On 2015 IDIBGI received the "HR Excellence in Research" award and is continuously improving their HR policies according to the principles of the European Charter & Code for Researchers.

Requirements of the candidates:

- University studies in Life Sciences / Health, preferably Degree in Biology, Biochemistry, Biomedicine, Biotechnology, Chemistry, Pharmacy, or similar.
- Master's degree in Molecular Biology, Molecular Biology or similar in Life / Health Sciences accredited for access to a doctoral program.
- High level of interest in cancer biology and molecular oncology.
- Average mark of academic record above 7 (out of 10).

Desired skills of the candidates:

- Previous experience in common laboratory techniques in cancer research, especially human cell culture, gene expression (RT / q-PCR), microscopy (fluorescence, confocal), cytometry, immunoblotting, etc. Previous experience in techniques such as chip, RNA-seq or genomic editing techniques (CRISPR) will be considered a plus.
- Previous experience in research topics related to the project (research in metabolism, cultures with immune cells).
- Previous participation in a research project related to cancer biology and molecular oncology.
- Entrepreneurial, creative person with organizational and planning skills.

Contact Person/Scientist in charge/Supervisor

- Name and Surname: Elisabet Cuyàs and Javier Menéndez
- Email: ecuyas@idibgi.org and jmenendez@idibgi.org

Applications: documents to be submitted and deadlines

- CV of the applicant (including the publications, participation in conferences or seminars-if any- and academic grades)
- Motivation letter
- Deadline: 20th February 2023
- Interested candidates can send their applications by mail to ecuyas@idibgi.org and jmenendez@idibgi.org

Candidates will receive the support of the supervisors, as well as the project management department, to prepare and submit their application with the IDIBGI as a host institution.

Note: Call is subject to the award and conditions of the grant