



POSTDOCTORAL POSITION IN THE CANCER METABOLISM GROUP

The *Laboratory of Cancer Metabolism* is looking for a highly motivated **postdoctoral candidate** willing to participate to the next call of Marie Curie Postdoctoral Fellowship and other mobility fellowship programs (EMBO LTF, Human Frontiers HFSP etc.).

The group focuses on understanding ***how the process of oncogenic transformation reprograms the translome***, particularly (1) how metabolic changes alter the *repertoire of translated mRNAs* and (2) how cancer cells can exploit such *translational networks* to survive and overcome standard chemotherapeutic regimens in colorectal cancer and other MYC-driven tumors.

We have identified a specialized subset of **40S ribosomes**, which in a complex with the RNA binding protein **LARP1**, bind and preserve a discrete population of mRNAs, termed **5'TOPs**, which not only include Ribosomal Proteins (RPs) and translational factors, but also a new set of anabolic mRNAs (Gentilella et al., *Molecular Cell* 17), which can be translationally switched ON and OFF depending on the cellular metabolic state (Fuentes et al, *Science Advances* 21; Morcelle et al, *Cancer Res* 19, Fuentes et al., *NAR Cancer* 2024). This mechanism plays a major role in **MYC-driven oncogenesis**, preparing the anabolic potential of transformed cells in a poised state and connecting it with the metabolic sensing pathway governed by mTOR (Fuentes et al., *PNAS* 2026).

The long term goal of the lab is to understand by a multi-disciplinary approach cellular adaptations sustaining the **biomass production** in tumor contexts, and to identify **metabolic vulnerabilities** that could constitute critical targets in cancer treatment.

The search is primarily targeted at **scientists who have recently graduated** in any of the fields related to molecular biology, biochemistry and cell biology with a competitive CV to sustain the application. The project requires solid expertise in molecular and cellular biology.

The Laboratory of Cancer Metabolism is located inside the IDIBELL, a research center that integrates the biomedical research of the Bellvitge University Hospital (HUB), the Catalan Institute of Oncology (ICO), and the University of Barcelona in the Bellvitge Campus (UB) and the Viladecans Hospital (HV), located in south Barcelona.

Please, send your CV and cover letter to:

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