

## PhD Position in Metabolomics and Data-Driven Precision Oncology at CIC bioGUNE

We seek a motivated PhD candidate to join “*PreMetaCan AECC*”, a cutting-edge project on cancer metabolism and precision medicine in collaboration between the [Precision Medicine and Metabolism Laboratory](#) (Oscar Millet and José M Mato) and the [Integrative Genomics Lab](#) (Urko M. Marigorta) at CIC bioGUNE, a Severo Ochoa Excellence research center in Bilbao, Basque Country, Spain. This position is part of a prestigious €2M Scientific Foundation of the Spanish Association Against Cancer (AECC) Excellence grant aimed at tackling systemic tumor-host metabolic interactions to advance precision oncology.

### Description of the project

The selected PhD student will work on measuring systemic metabolic alterations to refine cancer detection and clinical assessment. The research will integrate metabolomic profiles with genomics and transcriptomics to identify metabolic phenotypes associated with tumor development and progression. The project will analyze biofluid metabolomes obtained from a large cohort of healthy individuals, currently consisting of 20,000 participants and expected to grow to 30,000, with longitudinal clinical follow-up to track cancer development.

This project represents a new collaboration between both labs, combining complex trait genomics and population-scale metabolomics to study metabolism's role in disease. The PhD student will have access to cutting-edge IVDr 600 MHz spectrometers, high-throughput metabolic screening tools, and computational platforms for multi-omic data integration, working alongside experts in metabolomics, genomics, oncology, and bioinformatics.

### Profile of the candidate

We welcome applications from motivated young scientists with a background in Biology, Biochemistry, Biotechnology, Bioinformatics, Medicine, or related fields. Candidates with experience or a strong interest in metabolism, cancer biology, genomics, or multi-omics data analysis are particularly encouraged to apply. Given the nature of the project, computational skills in R or Python and familiarity with statistical genomics, machine learning, or biostatistics are not mandatory but will be considered a strong asset. Candidates must have completed their MSc degree at the time of incorporation, which is expected in the third quarter of 2025.

### What We Offer

The successful candidate will receive a full-time PhD contract and access to state-of-the-art facilities, including high-field NMR and LCMS technologies, computational resources, and a wealth of clinical and molecular datasets. The research will be conducted in a multidisciplinary and highly collaborative environment, providing extensive training in multi-omic data integration, biomarker discovery, and computational precision oncology. This position is an opportunity to contribute to an emerging research area while receiving cutting-edge training in bioinformatics, statistical genomics, and metabolic profiling. The student will also participate in local and international collaborations in the field of cancer metabolism and precision oncology.

### Application Details

Motivated candidates should submit an application package including (i) a detailed CV, (ii) a cover letter describing your research goals, and (iii) contact details for two references.

Applications should be submitted via the form available at <https://www.cicbiogune.es/job-offers-form>, and indicating **44621** as reference.

For further details and application instructions, please contact Dr. Oscar Millet (Precision Medicine and Metabolism Lab) and Dr. Urko M. Marigorta (Integrative Genomics Lab).