

Position Offered: POSTDOCTORAL RESEARCHER

Project: *Identification of genetic and epigenetic determinants involved in resistance to epigenetic stress in cancer*

Technological and scientific fields: Computational biology, Data analysis and Data integration, Genomics, Cancer Biology

Location: Sevilla, Andalucía, Centro Andaluz de Biología Molecular y Medicina Regenerativa (CABIMER). <https://www.cabimer.es/>

Research Group/PI: Epigenetics and Gene expression Group / Jose C. Reyes. <https://www.cabimer.es/en/research-groups/epigenetics-and-gene-expression/>

PROJECT SUMMARY

Cancer cells adapt and survive by acquiring and selecting molecular modifications in a process known as **tumor evolution**. One of the consequences of tumor evolution is the emergence of clones with different characteristics, vulnerabilities and drug resistance capabilities, making **tumors heterogeneous** and difficult to eradicate. Studying in detail how tumor evolution occurs is therefore a priority in modern molecular oncology, and the use of new tools for **big data analysis and artificial intelligence** is essential to this task. Tumor cells are not only genetically but also epigenetically heterogeneous, and current theories suggest that tumor evolution is the consequence of the interplay between genetic and epigenetic mechanisms. Here, we propose to use **computational analysis of genomic and epigenomic data** to investigate the interaction between epigenetics and genetics in cancer cells evolution.

PROFESSIONAL PROFILE

Minimum requirements:

- Doctorate in Biology, Biomedicine, Bioinformatics, or other doctorates related to life sciences, Medicine, Statistics, Mathematics or Informatics
- Knowledge of R software environment

Merits to be considered:

- Knowledge of Programming languages.
- Experience in bioinformatics and computational biology.
- Experience in ChIP-seq, RNA-seq, ATAC-seq and WGS analysis, network analysis, computational evolution and/or other genomic analysis.
- Experience in cancer biology.

WHAT IS OFFERED

Interdisciplinary project aimed at understanding the evolution of cancer cell genomes. Use of innovative genomic and epigenomic analysis technologies. Collaborations and short-term stays with international reference groups. Training plan that includes 60 ECTS to perform a master related to bioinformatics, deep learning and artificial intelligence applied to genomics.

Contract conditions:

Indefinite contract for a Postdoctoral Researcher associated to the Momentum Project of 4 years' duration according to Spanish science law. Gross annual salary (41.000 € - 52.000 €).

Start of contract: before 31 December 2024

PRINCIPAL INVESTIGATOR CONTACT

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Plan de Recuperación,
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