MD Anderson Cancer Center
Fundación • España

2026

CONVOCATORIA PARA EL APOYO AL **TALENTO EN INVESTIGACIÓN**

Beca Contrato Fundación MD Anderson Cancer Center España para jovenes investigadores de apoyo.

Position title: research assistant in molecular and translational cancer biology

MAKE HISTORY WITH US

1 ACADEMIC REQUIREMENTS

Master's degree in **Biomedicine** or related fields (Biomedicine, Molecular Biology, Biotechnology, Biomolecules, Biochemistry, Bioengineering).

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2 CONTRACT DURATION

One year, with the possibility of applying for fellowships.

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3 OUR RESEARCH GROUP:

The Breast and Gynecological Cancer Research group headed by Prof. Gema Moreno-Bueno in the Fundación MD Anderson Cancer Center España (joint laboratory with Translational Cancer Biology of the Instituto Biomédicas Sols-Morreale CSIC-UAM) focuses on the molecular study and translational research of cancer, mainly (but not limited to) breast and gynecological tumors.

Our research seeks to identify and validate new prognostic and predictive biomarkers and cancer-specific molecular targets. It combines basic studies of cancer biology with pre-clinical validation of the results in large cohorts of human samples and testing new therapeutic applications. Advanced genomic technologies and molecular pathology techniques are used to analyze tumor alterations and heterogeneity in patient samples. Ultimately, the aim is to understand key molecular mechanisms and develop innovative targeted therapies, including approaches based on nanotechnology.

Publications: https://www.ncbi.nlm.nih.gov/myncbi/gema.moreno-bueno.1/bibliography/public/

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4 KEY RESPONSIBILITIES

- The selected candidate will participate in research activities related to **functional molecular studies in cancer**, including:
- Performing **molecular techniques** such as Western blot and quantitative RT-PCR.
- Conducting **cell-based assays** including cell proliferation, cell death, and invasion assays using cancer cell lines.
- Studying **protein–protein interactions** through biochemical and molecular techniques (e.g., immunoprecipitation, proximity ligation assay – PLA).
- Investigating **post-translational modifications**, such as palmitoylation and phosphorylation.
- Performing **co-culture experiments** involving immune cells (e.g., NK cells, lymphocytes) and tumor cells in **3D culture systems**, including treatment with pharmacological agents and/or nanotherapies.
- Conducting **flow cytometry experiments** for cell death analysis and cellular subpopulation characterization.
- Performing **confocal immunofluorescence microscopy** experiments.

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5 REQUIRED EXPERIENCE

- Experience in the development of biomedical research projects, preferably in cancer research, metabolism, and/or cancer immunology.
- Knowledge of techniques for metabolic studies and/or post-translational protein modifications, particularly lipidomics.
- Experience with cell culture techniques and/or other preclinical models (organoids, PDXs).
- Knowledge of methodologies for gene modification in cell models (e.g., stable transfection, siRNA, shRNA, CRISPR/Cas9, targeted mutagenesis).
- Knowledge of microscopy techniques (confocal immunofluorescence) and/or flow cytometry.
- Advanced proficiency in MS Office (Word, Excel, and PowerPoint) and statistical software (SPSS and GraphPad).
- B2 level or higher in spoken and written English.

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6 ADDITIONAL MERITS THAT WILL BE POSITIVELY VALUED:

- Experience in immunohistochemical or transcriptomic studies in tissue samples.
- Certification for the handling of experimental animals (Function B).
- Experience in nanotherapy development and/or preclinical evaluation.