

Postdoctoral Position in Adoptive Immunotherapy with CAR-Killer Cells

The Candiolo Cancer Institute is seeking a highly motivated and talented postdoctoral researcher to join the Laboratory of Oncogenomics and work in the field of adoptive cancer immunotherapy. Our research focuses on the development and application of Chimeric Antigen Receptor (CAR)-killer cells to target and eliminate cancer cells, with a particular focus on colorectal cancer. The laboratory exploits its vast collection of patient-derived colorectal cancer xenografts and cell lines to single out subgroups of cases expressing high levels of specific CAR targets and bring the approach to full preclinical validation, in vitro and in vivo. Research activities will focus on optimizing the tumour penetration and cancer cell killing capabilities of natural killer (NK) cells engineered with chimeric antigen receptors (CARs). The project involves refining the functionality of CAR-NK cells by optimizing their tumour infiltration properties and enhancing their ability to eradicate cancer cells. Through targeted modifications and engineering strategies, the project seeks to improve the therapeutic potential of CAR-NK cells, validating the improvements through in vitro experiments and preclinical studies. Additional efforts will be directed towards fine-tuning CAR design and engineering protocols to ensure optimal performance while minimizing potential off-target effects.

Responsibilities:

- Conduct cutting-edge research on CAR-killer cell technology and its applications in cancer immunotherapy.
- Prepare and present research findings at scientific conferences and publish results in peer-reviewed journals.
- Contribute to grant writing and funding applications.

Qualifications and skills:

- Ph.D. in Immunology, Cell Biology, Molecular Biology, or other related field.
- Demonstrated experience in adoptive cell therapy, CAR-T or CAR-NK cell technology, and genetic engineering techniques.
- Strong background in cellular and molecular biology and immunology.
- Excellent communication skills and the ability to work both independently and as part of a collaborative team.
- A record of scientific productivity as evidenced by publications in peer-reviewed journals.
- Proficiency in flow cytometry, cytotoxicity assays, and in vivo tumor models.
- Previous experience with iPSCs is a plus but not mandatory

Application Process:

Interested candidates should submit the following documents via email at direzione.scientifica@ircc.it

- A cover letter describing research experience, interests, and career goals.
- A current curriculum vitae (CV) including publications in peer-reviewed journals.
- Contact information for at least two professional references.

Application Deadline: July 15, 2024

Contact Information: direzione.scientifica@ircc.it