

Research Officer / Postdoctoral Scientist | Translational Research, Immunotherapy and Immuno-Oncology

Cellular Cancer Therapeutics

- **Make an important contribution to the health of children through medical research**
- **Work with one of Australia's most respected national and independent medical research institutes**
- **Gain valuable experience working in a CAR-T cell research laboratory**
- **Located in Westmead, one of Sydney's major biomedical research hubs**

The Children's Medical Research Institute (CMRI) was Australia's first dedicated paediatric research facility and continues to be one of the nation's most highly regarded independent medical research centres. CMRI is located in Westmead, and research at the institute focuses on cancer and genome stability, nerve cell signalling, gene therapy, and embryonic development. Researchers at CMRI have access to state-of-the-art facilities and work alongside dynamic and supportive scientists that include university and graduate students, post-doctoral researchers, and laboratory directors. Our achievements are made possible by state and federal grants, a network of community supporters, and the Jeans for Genes® fundraising campaign.

We currently have a postdoctoral position available in the Cellular Cancer Therapeutics Laboratory at CMRI. The laboratory's focus is on developing and translating adoptive T-cell therapy for the treatment of cancers.

Novel therapeutic strategies in cancer immunotherapy have been developed with the introduction of genetic engineering technologies that permit efficient gene transfer in human primary T cells. By using recombinant lentiviruses as vectors, we are investigating the antitumor efficacy of T-cell immunotherapy across a broad range of liquid and solid tumours. Using both conventional and non-conventional CAR systems, our research work will lead to a better understanding of CAR-T cell immunotherapy, with the goal of progressing new adoptive T-cell therapies rapidly into the clinic.

The responsibilities of this postdoctoral position will include (but not limited to):

- working directly with the research unit head to design, develop, and execute bench experiments
- supervising technicians/research assistants/students in the conduct of bench experiments and coordinating core laboratory duties
- performing data analysis and management as well as analysis of experimental results to derive logical conclusions, drafting experimental procedures, preparing manuscripts pertaining to research work, and maintaining detailed laboratory records.

Bench experiments will require techniques including (but not limited to):

- cell culture of cell lines, primary tumour samples, and primary immune cells
- generation of transgenic cells, including in silico work, molecular cloning and restriction enzyme-based cloning, PCR, qPCR, transformation of bacteria, and plasmid amplification and preparation
- lentiviral production
- genetic modification using CRISPR/Cas9 based gene knockout and knock-in technology
- lentiviral transduction of cell lines and immune cells
- functional assays for early activation of effector cells, cytokine secretion, and cell proliferation
- cytotoxicity assays, flow cytometry and western blot

Experience in the methods described above is highly desirable.

The ideal candidate will have a PhD or MD/PhD in biological sciences (background in immunology desirable), a passion for science, and a desire to advance the understanding and treatment of cancer. A highly organised, enthusiastic, and self-directed individual with strong interpersonal skills and the ability to work in a dynamic environment is desired. Familiarity with general oncology and cancer pathogenesis; knowledge of molecular/genetic concepts, experimental methods, and data analysis; and the ability to maximise resources and troubleshoot effectively are essential. The candidate should have experience with and be willing to work with mouse models and should be comfortable with the handling of human blood and tissue samples.

The project is led by Professor Patrick Schlegel (Head of the Cellular Cancer Therapeutics Laboratory). This is a fantastic opportunity for researchers to enter a productive laboratory in a dynamic and professional organisation and to work directly with the principal investigator in this exciting research program.

The hired individual will be compensated with a competitive remuneration package in accordance with qualifications and experience. Additional benefits include the provision of a Public Benevolent Institution salary packaging scheme and participation in an employer-contributed superannuation fund. Previous applicants need not apply.

Applications should include a cover letter (citing **PV2212**), curriculum vitae, bibliography, brief statement of research interests, academic transcript and contact details (phone/email) of three professional referees and be forwarded to recruitment@cmri.org.au.

Please direct enquiries regarding the position to Josh Studdert: jstuddert@cmri.org.au.

Closing date for applications is **24th March 2022**.