



POSITION DESCRIPTION

POSITION TITLE:	Postdoctoral Research Fellow
POSITION LOCATION:	Olivia Newton-John Cancer Research Institute
EMPLOYMENT TYPE:	Full time and fixed term 2 years

POSITION CONTEXT:

The Olivia Newton-John Cancer Research Institute (ONJCRI) is an independent medical research located in Heidelberg. The ONJCRI is a leader in the development of experimental and breakthrough cancer treatments. We investigate and develop treatments for cancers of the breast, bowel, lung, melanoma, prostate, liver, gastrointestinal and brain. Our researchers and clinicians are running more than 200 clinical trials, giving patients access to potential new treatments including immunotherapies and personalised medicine. These trials are an integral part of our journey towards finding better, more effective treatments for cancer.

The ONJCRI is the successor to the global Ludwig Cancer Research organisation with a proud track record of a quarter century of collaborative clinical research programs with Austin Health. Much of ONJCRI's strong foundation is built on the Ludwig Cancer Research legacy. Moreover, through the ONJCRI's exciting partnership with La Trobe University as its School of Cancer Medicine, we play a pivotal role in training Australia's future generations of medical researchers.

This position is within the Tumour Immunology Laboratory of the Cancer Immunobiology Program (CIBL). The Program undertakes basic research in cancer immunotherapy and the cellular biology of cancer, particularly melanoma, which is funded through both Australian and International competitive research grants. We developed integrated clinical and laboratory teams focused on understanding immune responses against cancer and exploring new cancer therapies based on this knowledge. Our research brings these elements together with the intention of achieving greater clinical benefit.

PRIMARY RESPONSIBILITIES:

The CIBL Program integrates clinical and laboratory teams in order to better understand immune responses against cancer and to develop new cancer therapies based on these understandings.

Our latest research identified molecules that are required for the activation of innate immune cells as highly expressed on cancer (*Butyrophilin 2A1 is essential for phosphoantigen reactivity by $\gamma\delta$ T cells*. Science 09 Jan 2020 DOI: 10.1126/science.aay5516. The successful applicant will work on deciphering the exact role that these molecules play in cancer immunity. Additional research in the program focuses on

- (i) Melanoma cell biology, cellular plasticity, cellular immunology and the role of cancer antigens

- (ii) Analysis of human anti-cancer immunity that arises spontaneously in cancer patients
- (iii) Antigen processing & presentation - exploring the regulators of DC function including antigen uptake, processing, cross-presentation & T cell stimulation

The program has been particularly interested in malignant melanoma as a disease for the development of cancer vaccines, cancer immunotherapies, and understanding the characteristics of antigen systems for immune targeting.

The post-doctoral fellow will have the opportunity to work on a suite of projects which explore the role of immunotherapy on cancer regulation.

REPORTING LINES:

This position reports to the Laboratory Head, Tumour Immunology Laboratory. There are no direct reports to this position although the Postdoctoral Fellow will be involved with supervision of junior staff and students.

KEY RELATIONSHIPS:

The following key relationships that are an essential component of the position include:

Internal:

- Researchers (staff and students) within the Tumour Immunology Lab and Cancer Immunobiology Program
- Other lab groups within ONJCRI
- Professional Services staff of ONJCRI

External:

- Major collaborators as warranted by the research program, including academic, industry and pharmaceutical companies.
- Relevant hospital departments and groups.

ACCOUNTABILITIES:

Experimentation

- Develop and nurture a research program consistent with the overall goals of the laboratory
- Establish or access new or existing technologies and techniques applicable to the research goals
- Perform laboratory studies using following techniques:
 - Flow cytometry
 - IHC or IF
 - Mouse work including injections, blood draws and analysis of samples

Supervision

- Provide support and direction to other staff and students in the laboratory

Other

- Maintain currency in the relevant scientific literature
- Attend and present data at relevant scientific conferences
- Seek competitive external funding
- Participate in wider Institute activities

QUALIFICATIONS:

Minimum qualification is a PhD in a relevant field. Experience in immunology is essential. Experience in cancer cell biology is desirable.

EXPERIENCE & CAPABILITIES:***Generic:***

- Dedicated and enthusiastic work ethic and a proven track record in cellular immunology, preferably cancer immunology.
- Work with drive and independence and be capable of a high standard of written and oral communication.
- Strong interpersonal skills. This is a substantial position, with the potential to provide opportunities for the supervision of students and research assistants.
- Responsive to the regulations stipulated by the ONJCRI's Animal Ethics and Safety Committees and the Office of the Gene Technology Regulator (OGTR), and other committees and regulatory bodies as applicable.

Specific:

Experience in the following technical areas:

Essential:

- Experience with murine models and animal handling
- Flow cytometry
- Cellular Immunology
- Tissue culture

Desirable:

- Cell sorting expertise
- Microscopy and Imaging
- Immunoprecipitation/western blot analysis/proteomics
- Cell biology