POSITION DESCRIPTION

POSITION TITLE: **Postdoctoral Research Fellow**

POSITION LOCATION: **Olivia Newton-John Cancer Research Institute**

EMPLOYMENT TYPE: **Full time and fixed term**

POSITION CONTEXT:

The Olivia Newton-John Cancer Research Institute (ONJCRI) is an independent medical research institute located in Heidelberg, Victoria. Our mission is to discover and develop breakthrough therapies to help people live better with cancer and defeat it. Our research laboratories sit alongside patient treatment facilities to optimise collaboration between researchers and clinicians. The integration of laboratory and clinic ensures the rapid translation of scientific discoveries into clinical trials for the development of new cancer treatments. We investigate and develop treatments for cancers of the breast, lung, melanoma, prostate, liver, gastrointestinal and brain. The ONJCRI is a global leader in the development of immunotherapies, targeted therapeutics and personalised cancer medicine and sponsors early phase clinical trials.

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 *Mucosal Immunity and Cancer (MIC) Laboratory* of the Cancer Immunobiology Program. Research efforts within the MIC Lab are the pursuit of defining the role of T cells and innate lymphocytes in development of gastrointestinal cancers. For this the MIC Lab requires a postdoctoral research fellow who will work on this project to:

- Elucidate the role of innate immune cells in maintaining intestinal homeostasis.

- Uncover the role of T cells and innate immune cells in development of diseases of the gastrointestinal tract, including colitis and cancer.

PRIMARY RESPONSIBILITIES:

The Postdoc will work under the guidance of the Laboratory Head MIC Lab (Dr Lisa Mielke) to drive the two lines of research outlined above. The Postdoc will be required to perform a range of cell biology and molecular biology techniques. These will include, tissue and organ preparation for flow cytometry analysis and cell culture, maintenance of primary cells in culture, RNA-sequencing and immunofluorescent imaging.

The person will also help with the supervision of research technicians in MIC Lab, as well as with PhD and Honours students. Likewise, it is expected that the person will contribute to collaborations and

the overall scientific output and mission of cancer immunobiology program and of ONJCRI in general.

REPORTING LINES:

This position reports to the Laboratory Head, Mucosal Immunity and Cancer Laboratory, Dr Lisa Mielke. The Postdoc may 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:	Head of the MIC Lab.
Postdocs, Honours/PhD students and Research Assistants in MIC Lab.
Clinicians at ONJCRI
Laboratory Heads and Senior staff at ONJCRI, in particular Jonathan Cebon, Andreas Behren and Matthias Ernst.
David Baloyan, flow cytometry facility.
Dr Wei Shi at WEHI for bioinformatics support
Animal House staff Austin and La Trobe University
Animal Ethics Committee(s) Austin and La Trobe University

ACCOUNTABILITIES:

- Establish experimental protocols to analyse T cells and innate immune cells from human blood and tissue samples.
- Induction and analysis of models of colon cancer to study immune cell function.
- Establish protocols to examine immune cell function in the intestine.
- Bioinformatic analysis of immune cell gene expression signatures isolated from preclinical models of cancer and patients with cancer.
- Meticulous record keeping
- Represent ONJCRI at relevant scientific meetings
- Participate in and speak at lab meetings / journal clubs
- Drafting research papers and research grant applications
- Writing of successful application to the relevant OGTR and Animal Ethics Committee(s)
- Participate in relevant committees or subcommittees at ONJCRI
- Co-supervision of Research Assistants, Honours and PhD Students

CHALLENGES:

This position requires an extensive array of skills, in particular with establishing and assessing preclinical models of cancer and with the handling of difficult to grow primary lymphocyte cultures. Although the person will have his/her own project, it is expected that the person broadly collaborates with the other postdocs and students in the Cancer Immunobiology Program and contributes their skills to these projects. The person will also need to have experience in guiding more junior colleagues through their research projects.

It is mandatory that the person keeps abreast of the scientific literature, not only of that immediately relevant to the project, but also on a broader level to ensure a competitive nature of the overall direction of the project(s). For this the person will be experienced in drafting well-structured research

manuscript and research grant applications and is skilled in communicating their research to scientists with unrelated research backgrounds.

QUALIFICATIONS:

A PhD degree in the field of immunology is essential.

EXPERIENCE & CAPABILITIES:

- Proven track record of performing independent research at a high level recognized by peers

- Capacity to work in and contribute to a team project as a valued and regarded collaborator

- Deliver in realistic time frames

- Communication skills to convey complex concepts in basic terms to peers, PhD/Honours students and research assistants

- Assist in providing effective supervision of students (co-supervisory role) and research assistants

- Skilled in generating publication-quality data, and the writing of manuscript and grant applications.