



POSITION DESCRIPTION

POSITION TITLE: Research Assistant

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 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 Metastasis Research Laboratory (MRL) that operates under the umbrella of the newly created Breast Cancer Translational Program. MRL is involved in basic and preclinical research investigating the molecular basis of breast cancer metastasis and the development of novel targeted therapies to combat metastatic disease. MRL also has the unique opportunity to liaise directly with patients currently undergoing breast cancer treatment in the clinic. Our Breast Cancer Biobank, established in 2017 forms an important repository for translational laboratory work.

PRIMARY RESPONSIBILITIES:

The Research Assistant will have two primary responsibilities. One will be to take responsibility for developing and maintaining organoid cultures for drug testing. This will require a person with experience in sterile tissue culture techniques. The other role will be to assist in collecting and processing tissue and blood samples from cancer patients, under the guidance of the breast oncologist. This will require interaction with patients and processing samples from patients for subsequent genomic and histological analysis. Experience in working with mouse models of cancer would be a bonus. Other duties may include genotyping and maintenance of transgenic mouse colonies, analysis of mouse tissues using DNA, RNA and protein based techniques including qPCR, western blotting, immunohistochemistry, FACS and microscopy, and general laboratory maintenance.

REPORTING LINES:

This position will report both to the Laboratory Head of MRL, Prof. Robin Anderson and to Dr. Belinda Yeo, Medical Oncologist. The Research Assistant 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:

Scientists and staff within the Metastasis Research Laboratory
Breast medical oncologists and cancer nurses
Other groups within the Breast Cancer Translational Program
Other groups within the ONJCRI
Administrative staff of the ONJCRI

External:

Major collaborators in Melbourne and overseas
Relevant hospital departments and groups
Other collaborators as warranted by the program

ACCOUNTABILITIES:**Conduct a range of standard experiments in a research laboratory setting:**

- Development and maintenance of organoid cultures derived from breast cancer samples.
- Testing of novel compounds on cancer cells in tissue culture, both in standard conditions and in organoid cultures.
- Processing of tissues for histology and immunohistochemistry.
- Experimentation on mice including drug and dietary intervention studies and collection and analysis of tissue samples from mice.
- Genotyping and documentation of knockout mouse colonies.
- Generation of publication-quality data for high impact journals and funding applications.
- Maintenance of highly accurate records and validation of data.
- Analysis of experimental data and preparation of reports of an interpretive nature.

Laboratory Maintenance

- Maintenance of supplies and validation of operational status of equipment.
- Purchasing.
- Maintenance of animal usage records.

Duties in the clinic:

- Interact with cancer patients and organise informed consent for tissue collection.
- Maintain a database of tissue samples
- Transfer samples from the clinic or from pathology or from the ward back to laboratory and process them for subsequent histological and genomic analyses
- Cut sections using a cryostat or microtome
- Complete immunohistochemistry or *in situ* hybridization studies using commercially available or in-house developed antibodies or probes, respectively.

AUTHORITY:

Delegated authority is in accordance with ONJCRI policies and procedures.

CHALLENGES:

- Accurate and meticulous collection of specimens and validation of data for reports and presentation
- Interaction with patients
- Working with small animals and with potentially infectious clinical specimens
- Some out of hours work may be required
- Contribute to efficient and safe operation of laboratories
- Maintain an awareness of the short and long terms goals of projects

QUALIFICATIONS:

The Research Assistant will have a science degree with honours or equivalent qualifications or experience in pharmaceutical or biological sciences such as molecular biology, biochemistry, physiology, pharmacology etc. Self-motivated individuals with a capacity to learn new techniques are encouraged to apply.

EXPERIENCE & CAPABILITIES:

- Preferably up to 5 years laboratory experience as part of a research team with demonstrated ability to work both independently and co-operatively in a small team environment with minimal supervision.
- A meticulous approach to experimental work including the ability to maintain accurate and up to date record of experiments in a laboratory notebook.
- Excellent organisational and computer skills involving the accurate entry of data and completion of basic calculations.
- Experience in handling mice, maintaining mouse colonies, genotyping and database maintenance
- Experience in planning and conducting drug studies in mice including the collection and analysis of samples from these animals.
- Experience with preparation of tissues for histology and immunohistochemistry
- Experience with cell culture and cell-based *in vitro* functional assays
- Experience with basic molecular and protein techniques such as PCR, gene expression manipulation and western blotting

- Ability to analyse data and to produce reports of an interpretive nature
- Demonstrated research productivity at a high level
- Innovative problem solving skills in order to complete projects according to deadlines
- Good record-keeping skills
- Willingness to learn new techniques and the capacity for flexibility and willingness to change direction based on research needs
- Effective interpersonal and communication skills together with the capacity to interact with
 - patients and to participate in laboratory meetings and provide feedback
 - Ability to assist in maintenance of the laboratory
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THE FOLLOWING ATTRIBUTES WOULD BE STRONGLY REGARDED:

- Experience in histology and immunohistochemistry
- Good tissue culture skills
- Ability to meet and talk to patients
- Ability to work with thoroughness, accuracy and attention to detail with demonstrated innovative problem solving skills in order to complete projects according to deadlines.
- Good record-keeping skills.
- Willingness to learn new techniques and the capacity for flexibility and willingness to change direction based on research needs
- Effective interpersonal and communication skills together with the capacity to participate in laboratory meetings and provide feedback
- Ability to assist in maintenance of the laboratory (organising lab supplies and associated documentation).