



# Position Description

<b>JOB TITLE:</b>	<b>Senior Scientist</b>
<b>DEPARTMENT:</b>	<b>Personalised Medicine – Translational Tumour Biology</b>
<b>REPORTS TO:</b>	<b>Personalised Medicine Program Leader Group Leader, Translational Tumour Biology</b>
<b>LAST DATE REVIEWED:</b>	<b>December 2018</b>

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## JOB SUMMARY

The Zero Childhood Cancer (ZCC) Program is a national trial being led by Children's Cancer Institute, and Kids Cancer Centre, Sydney Children's Hospital, to identify individual cancer therapy for children, adolescents and young adults with high-risk cancer where the expected survival rate is less than 30%. The objective of the program is to prolong survival and reduce treatment side effects. The data generated by the ZCC trial is globally unique for paediatric cancer.

This position will contribute to studying the biology of genomic discoveries arising from the Zero Childhood Cancer National Clinical Trial by developing model systems to investigate the functional molecular consequences of mutations/fusions, developing functional genomic screens, test drug responses, and identifying potential drug targeting strategies to translate to the clinic.

With close to 50% of enrolments being extracranial solid tumours (30% sarcoma), the individual will leverage their strong initiative and experience in the biology, genomics and proteomics of paediatric sarcoma to study novel and actionable targets.

## PRIMARY TASKS / RESPONSIBILITIES

- Develop cell line and murine models of paediatric sarcomas and other extracranial solid tumours, in part based on data generated through the Zero Childhood Cancer PRISM project.
- Develop and advance the portfolio of patient derived xenografts developed from paediatric sarcoma samples studied as part of the Zero Childhood Cancer PRISM project.
- Undertake cellular and molecular studies in models of high-risk childhood cancers to understand the molecular mechanisms driving cancer development and progression.
- Provide significant input into research directions, and develop an independent program of paediatric sarcoma research. This independent research will be aimed at finding novel targets and accompanying targeted treatments in paediatric tumours, including but not limited to phosphoproteomic/kinomic profiling of translocation-associated paediatric and AYA sarcomas. In-depth knowledge on the biology of paediatric sarcomas, experience in Mass Spectrometry (MS)-based approaches and experience in translational research in these tumours are therefore essential.
- Conduct research both as a team member and independently to undertake drug screening in models of paediatric sarcoma and other high risk paediatric cancers for the purposes of identifying potentially active drugs



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in individual tumours, and to provide basic research into the associations between genomic changes in sarcomas and drug responses.

- Achieve an outstanding level of competence in all aspects of experimental work
- Produce and contribute to high quality publications
- Prepare and assist in the preparation of research proposal submissions as appropriate
- Present research data at conferences and seminars
- Train, supervise and guide junior researchers & students on a day to day basis
- Co-supervise postgraduate students
- Invitations to speak locally
- Involved in professional activities
- Co-financial management of grants
- Be involved in CCIA activities
- Prepare or assist with the preparation of gene technology and ethics approvals
- Comply with regulatory guidelines (including OGTR and ethics) and Institute policies

## KEY SKILLS

- Highly developed interpersonal skills
- Excellent listening, verbal and written communication skills
- Excellent attention to detail
- Demonstrated initiative
- Flexible attitude to work
- Management skills
- Problem solving skills
- Advanced technical skills
- Advanced analytical skills

## MINIMUM REQUIREMENTS

### Qualifications

- Doctorate in a relevant scientific or medical field.

### Experience and requirements

- At least 4 years postdoctoral research experience
- Demonstrated ability to design and conduct experiments independently as well as in a team environment
- Given the relatively high number of sarcoma patients enrolled in the Zero Childhood Cancer Program, it is essential that the candidate will have proven and ample (>6 years) experience in studying the biology and behaviour of paediatric sarcoma, and has experience in the development of in vivo and in vitro models of paediatric sarcoma. This will include a strong interest in (but not restricted to) Ewing sarcomas, osteosarcomas, rhabdomyosarcoma and synovial sarcomas, and an in-depth knowledge of mechanisms driving progression of these tumours (eg. pathognomonic and/or novel fusion oncogenes).



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- The successful candidate will have published experience in the conduction and integration of high-throughput genomics/proteomics/kinomics data, specifically including expertise on large-scale siRNA screenings and mass spectrometry (MS)-based proteomic profiling studies and handling of corresponding complex datasets, accompanied by validation studies in vitro, in vivo and on patient material. Using such data as a methodology to study novel and actionable targets in paediatric sarcomas will be a significant advantage.
- The successful candidate should be able to demonstrate prior experience in identifying optimal treatment regimens using relevant combinatorial drug testings, specifically in paediatric sarcoma.
- Candidates that can bring novel paediatric sarcoma cell line and xenograft models to the Institute will have a significant advantage
- Preference will be given to candidates that can bring novel expertise to the Institute, including experience on functional small animal imaging studies, such as PET and SPECT in bone and soft-tissue sarcomas, to strengthen the translational potential of preclinical research
- The successful candidate will have established and maintained strong international networks in the field of paediatric sarcoma research, and a broad-based international research experience will be considered a significant advantage as this will both bring novel knowledge to the Institute as well as facilitate international dissemination and implementation of results of the Zero Childhood Cancer Program.
- The international network of the candidate should cover basic, translational and clinical researchers, as the translation of basic findings to the clinic is key in this position and the rarity of research on paediatric sarcomas stresses the need for international collaborations.
- In-depth knowledge on cellular cancer signalling pathways, in particular on those deregulated in paediatric sarcomas, including (receptor) tyrosine kinase signalling networks and DNA damage response pathways.
- A strong publication track record in well-regarded journals in the field of sarcoma research, relative to opportunity.
- Proven ambition for career development and international recognition (e.g. prestigious distinctions, awards, grants)
- Experience in supervision of junior research staff and students
- Exhibits a high degree of professionalism and respect for others
- Demonstrated ability to manage several research projects concurrently
- Demonstrated commitment to conducting experiments involving humans, animals & GMO's under strict ethical and regulatory guidelines
- Demonstrated ability to secure funding (including personal grants) to support research activities and develop and administer a budget
- Demonstrated commitment to OGTR and other regulatory requirements
- An interest in developing techniques and using the latest technology in research projects

## EXPECTED OUTPUTS

### Telephones & Email

- Respond to emails in 48 hours

**Children's Cancer Institute policies applicable**



# Position Description

- Code of Conduct/Ethics
- Whistle-blowing
- Use of Electronic Resources
- Occupational Health & Safety
- Appropriate Workplace Behaviour
- Privacy

## SERVICE STANDARDS

- Respond to phone calls and emails within 48 hours

## COMPLIANCE AND CODE OF ETHICS AND CONDUCT

Staff members are responsible for ensuring that they are familiar with and comply with their conditions of employment as stated in their individual contract, all Children's Cancer Institute Policies and Procedures and relevant ethical and regulatory guidelines. Staff must be aware that breaches by individuals will not be tolerated or condoned and may be subject to the Disciplinary Action Policy.

Your knowledge and awareness of Children's Cancer Institute Policies and Procedures (including the Code of Ethics and Conduct), will be monitored from time to time to ensure that our compliance program is effective.

Part of compliance adherence involves the use of standardised forms, checklists, and other aids (as appropriate) to ensure that important compliance issues are not overlooked. All forms must be used in accordance with instructions and the procedures as outlined in the relevant policies and procedures to ensure that compliance to the laws and regulations occurs.

## O H & S

- Must adhere to all OHS policies and procedures
- Take reasonable care for their own health and safety and the health and safety of other people who may be affected by their conduct in the workplace
- Actively participating in health and safety meeting, training and induction programs
- Complying with all safe work procedures and instructions
- Use equipment in compliance with relevant procedures, without wilful interference or misuse
- Ensure that any hazardous conditions, near misses and injuries are reported immediately to the supervisor
- Must not wilfully or recklessly interfere with or misuse anything provided in the interest of environment health and safety or welfare

## REPORTING STRUCTURE

Position reports direct to: Translational Tumour Biology Group Leader

Departmental Structure: See Organisation Chart

**Note:** Reporting structure may change subject to management decisions and business requirements.



# Position Description

## APPROVED BY

All parties below need to approve by signature and date.

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Manager Name

Manager

Date: 17 December 2018~~14 December 2018~~

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Name

Position

Date: \_ \_ \_ \_ \_