

# JOB DESCRIPTION

## TELETHON KIDS INSTITUTE



<b>Why is this Job Description being written?</b>		<input checked="" type="checkbox"/> New Position <input type="checkbox"/> Replacement Position <input type="checkbox"/> Position re-designed <input type="checkbox"/> Position not previously described		
<b>POSITION DETAILS:</b>	<b>Position Title:</b>	<b>SENIOR RESEARCH OFFICER - BIOINFORMATICIAN</b>		
<b>Team:</b>	Diabetes and Obesity	<b>Research Focus Area:</b>	Diabetes and Obesity	
<b>Position reports to: (role)</b>	Clinical Researcher			
<b>Location:</b> <i>include all possible locations</i>	100 Roberts Road Subiaco			
<b>POSITION PURPOSE:</b> In one or two sentences briefly summarise the overall purpose of this role, i.e. broadly, <b>what</b> this role does and <b>why</b>				
<p>This role is part of the LIFECYCLE team. LIFECYCLE brings together international pregnancy and child cohort studies to offer a unique opportunity to identify a wide range of early life stressors linked with developmental and health trajectory variations, and to the onset and evolution of non-communicable diseases. The successful applicant will be responsible for using genome wide epigenetic approaches to study the associations of early-life stressors and the integrated early-life exposome on DNA from birth. This role involves an initial phase of cleaning, extracting and harmonizing database variables according to consortium and working package requirements. The applicant will be required to possess suitable bioinformatics skills, a willingness to travel for additional training and a desire to build further expertise. This role is 0.8-1.0 FTE.</p>				
<b>KEY RESPONSIBILITY AREAS</b> <i>(Please list in order of importance)</i>				
<b>Key Position Accountabilities</b> What are the main areas for which the position is accountable	<b>% of Total Role</b>	<b>Inputs:</b> What are the key activities or tasks to be carried out?	<b>Outputs:</b> What are the expected end results?	<b>Measures:</b> How it is measured

<b>Data Analysis</b>	60	<ul style="list-style-type: none"> <li>• Clean and harmonize data according to LIFECYCLE consortium requirements</li> <li>• Perform individual participant meta-analyses</li> <li>• Form trajectories of cardiometabolic risk, respiratory (lung development and lung disease trajectories) and early behaviour/cognition by random effects models, generalised estimating equations and latent class growth analyses</li> <li>• Analyse early life exposures with later cardiometabolic, respiratory and mental health development trajectories, respectively</li> <li>• Analyse mediation of DNA methylation on association of early life exposure with cardiometabolic, respiratory and mental health development trajectories, respectively</li> <li>• Assess the persistence of differences in DNA methylation as related to CV, respiratory and mental health outcomes</li> <li>• Develop statistical approaches for causal inference and life course trajectory analyses</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaned data according to consortium requirements</li> <li>• Harmonized early life, respiratory, cardiovascular and mental health variables from the Raine Study</li> <li>• Trajectory development</li> <li>• EWAS results of phenotypes and early life exposures</li> <li>• Application of novel statistical methodologies</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendations for interventions to modify exposure to early-life stressors</li> <li>• Drafted reports and manuscripts</li> </ul>
<b>Database Management</b>	20	<ul style="list-style-type: none"> <li>• Investigate and recommend data-sharing platform (eg DataSHIELD) for key datasets</li> <li>• Assist with setup and maintenance of data-sharing platform (in conjunction with relevant internal platform teams)</li> <li>• Contribute to set up of governance associated with data-sharing platform</li> <li>• Ensure datasets are added to data-sharing platform as appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• Establish Governance (policies &amp; procedures) for use (including data access) of a data sharing platform at Telethon Kids Institute</li> <li>• Establish data sharing platform at Telethon Kids Institute</li> </ul>	<ul style="list-style-type: none"> <li>• Key datasets (eg Raine data) are made available through data-sharing platform (eg DataSHIELD) as part of LIFECYCLE</li> <li>• Assist with preparation of White paper on Governance for West Australian data use on data sharing platform as part of LIFECYCLE</li> </ul>
<b>Research Administration</b>	10	<ul style="list-style-type: none"> <li>• Contribute to the development of protocols</li> <li>• Provide study reports as required</li> <li>• Contribute to the effective distribution of research findings</li> </ul>	Study reports/protocols as required	

General Group Administration	10	<ul style="list-style-type: none"> <li>• Coordinate communications and emails between stakeholders</li> <li>• Organize meetings, coordinate and distribute agendas, take minutes</li> <li>• Coordinate governance between Raine Study, Lifecycle and other stakeholders.</li> </ul>		
<b>ESSENTIAL SKILLS, KNOWLEDGE AND EXPERIENCE:</b>				
<b>Qualifications:</b> what are the minimum educational, technical or professional qualifications required to competently perform role		<ul style="list-style-type: none"> <li>• Bachelor's degree in science or a related field</li> </ul>		
<b>Skills, Knowledge &amp; Experience:</b>		<ul style="list-style-type: none"> <li>• OMICS and/or relevant bioinformatics expertise</li> <li>• High level of interpersonal and communication skills</li> <li>• Demonstrated ability to set goals, meet deadlines and prioritize tasks</li> <li>• High level of computer and technical skills</li> <li>• Knowledge of statistical analysis software (e.g. SPSS and R)</li> <li>• Ability to work both independently and as part of a wider collaborative team</li> <li>• Experience with quantitative analysis, epidemiology and biostatistics</li> </ul>		
<b>DESIRABLE SKILLS, KNOWLEDGE AND EXPERIENCE:</b>				
<b>Qualifications:</b> what are the minimum educational, technical or professional qualifications required to competently perform role		<ul style="list-style-type: none"> <li>• PhD in a related field</li> </ul>		
<b>Skills, Knowledge &amp; Experience:</b>		<ul style="list-style-type: none"> <li>• Database management</li> <li>• Experience creating and interpreting data algorithms</li> <li>• Experience with high dimensional -omics data sets</li> <li>• Knowledge of statistical analysis software (e.g. SPSS and R)</li> <li>• Prior experience in development of novel statistical methodologies</li> </ul>		
<b>SCOPE:</b>				
<b>Financial accountability:</b> Does this role have accountability for a budget? No				
<b>People responsibility:</b> Does this role have any direct reports or indirect reports (through direct reports)? No				
No. of direct reports	0	No. of indirect reports	0	

**ORGANISATIONAL CHART:** (please complete using position titles or insert diagram below)

Next level of supervision

Research Focus Area  
Head Chronic and  
Severe Diseases

Immediate level of supervision

Head Diabetes and  
Obesity Research

Other roles reporting  
supervisor

Obesity Clinical  
Researcher

Direct reports

Senior Research  
Officer

**ADDITIONAL INFORMATION:** is there any additional information that needs to be understood to explain this role?