



2027 Summer Research Project Template

Help us present your project in a way that connects with the right students. Thoughtful, engaging descriptions tend to attract stronger and more suitable applications. Thank you for putting a project forward - these programs rely on your contribution, and we couldn't do it without you.

Section	Description
Project title	Protecting Children from Invisible Chemical Exposure During Heart Surgery: A Clinical Study and National and International Survey
Hours & delivery	Hours: 20–36 hours per week over 6–10 weeks (aligning with 2027 Summer Research program dates). Delivery mode: Hybrid (primarily flexible remote/office work with on-site/in-office supervision and collaborative team check-ins). Location: Child Health Research Centre, University of Queensland & Queensland Children's Hospital (Centre for Children's Health Research (CCHR), Level 7, 62 Graham Street, South Brisbane QLD 4101).
About the project (150–250 words)	Thousands of Australian children undergoing life-saving cardiac surgery are exposed to plastic chemicals, such as phthalates, bisphenols, and PFAS, that leach directly into bloodstreams from cardiopulmonary bypass (CPB) equipment. Despite potential cardiotoxic and developmental risks, regulatory standards and data in Australia remain limited. This project has two parts running in parallel. At Queensland Children's Hospital (QCH), a clinical study is evaluating chemical exposure in children having cardiac surgery on CPB. Alongside this, a survey is mapping the CPB circuit devices (brand, type and plastic composition) used in paediatric cardiac surgery, across Australia and internationally. The summer scholar will help with ethics and database setup for both studies under close supervision and, depending on progress, may assist the supervisor with early data analysis. Any contact with clinicians or organisations will be done with, or closely supported by, the supervisor. Scholars will gain hands-on experience of running clinical and international research at the same time.
What you'll do (100–150 words)	QCH Clinical Study Setup: Help prepare ethics and governance documents, build and test REDCap data forms, and support study coordination with the clinical team. Survey Setup: Help prepare ethics documents, build the REDCap survey, compile a contact list of paediatric cardiac surgery centres in Australia and overseas, adapt survey materials for international distribution, and send invitations and reminders. Analysis and Reporting: Where data are available, work with the supervisor on descriptive analysis of survey responses, and summarise findings and relevant literature into short team updates.
What you'll learn (100–150 words)	Guided Clinical Research Management: Experience how clinical research projects are structured, run, and governed within a joint university and hospital setting. REDCap Database Skills: Develop practical technical skills in designing and managing data collection instruments under direct supervision. Professional Communication: Learn best practices in health communication and stakeholder engagement through active mentorship. Paediatric Translational Health: Gain foundational knowledge in environmental toxicology, medical device safety, and clinical trial setup. Data Analysis: Gain introductory experience in cleaning and describing research data alongside a biostatistician.



Project outcomes (75–125 words)	Co-authorship & Research Dissemination: Potential co-authorship on peer-reviewed journal manuscripts, conference abstracts, or working reports resulting from the project, subject to scholar contribution. Scholars will also contribute to a summary of the Australian survey findings.
Who should apply? (75–125 words)	This project is well-suited to 3rd/4th year undergraduate or postgraduate students in Nursing, Public Health, Medicine, Pharmacy, Health Sciences, or related disciplines. No prior research or interviewing experience is required, as tasks will be carried out with full supervisory support. Key attributes include high attention to detail, strong written communication skills, eagerness to learn, and interest in paediatric health or clinical research operations.
Team & supervision (75–125 words)	The student will work under the direct mentorship and close supervision of Dr. Mari Takashima (Postdoctoral Research Fellow / Clinical Research Manager) within a multidisciplinary translational research environment spanning the University of Queensland and Queensland Children's Hospital. You will work closely with clinicians, perfusionists, and public health researchers.
Additional opportunities (optional)	Presentation Opportunities: Scholars will be supported to present their project findings or poster at internal team meetings, school seminars, or student research symposia (if available). Publication & Dissemination: Direct mentorship in clinical trial administration and opportunities to contribute to journal manuscripts or conference abstracts
Additional requirements (if applicable)	Completion of basic research integrity and data governance orientation modules upon commencement.
	Yes, students may contact the supervisor before applying.
Contact	Direct enquiries to: Dr. Mari Takashima (School of Nursing, Midwifery and Social Work / Child Health Research Centre) – m.takashima@uq.edu.au