Perkins Student Projects 2026

HARRY PERKINS INSTITUTE
OF MEDICAL RESEARCH

About the Perkins

Thank you for your interest in becoming a student at the Harry Perkins Institute of Medical Research. Students form an integral part of what we do. Together, we're making progress every day toward preventing, diagnosing and defeating disease.

Since 1998, the Perkins has grown to become one of the nation's leading research hubs, where more than 400 research, professional and clinical trial staff work together to defeat disease.

Boasting two state-of-the-art research facilities on the QEII Medical Centre and Fiona Stanley Hospital precincts, as well as laboratories at Royal Perth Hospital, the Perkins has created a culture of innovation and collaboration to deliver better patient outcomes faster.

Research at the Perkins is focussed on the major diseases that impact the WA community. This includes cardiovascular disease, cancer, diabetes and rare genetic diseases. Our teams investigate the genetic causes of these diseases and develop new treatments to improve the quality and length of people's lives.

If you're like us and want to undertake cutting edge research that uncovers new ways to prevent and treat disease, then join us in our mission to improve community health.

We provide project opportunities for students from any university enrolled in degrees including:

- Bachelor of Engineering with Honours
- Bachelor of Science with Honours
- Bachelor of Biomedical Science
- Relevant masters programs
- PhD studies

If you are interested in a student project, please contact the Laboratory Head with whom you would like to work.

Learn more at perkins.org.au
Any questions? Reach out to study@perkins.org.au

Why Study at The Perkins?

With friendly and cooperative teams and world-class amenities that include a 250-seat auditorium, tech laden meeting rooms and seminar rooms, on-site cafés, fantastic end-of-trip facilities and a range of fitness and recreational opportunities available on campus–the Perkins provides an exciting environment aimed at increasing both professional and social collaboration.

The Perkins combines scientific talent, advanced research technology and pioneering facilities to enable great partnerships between the State's major research groups. Our teams are led by global experts in their field–each making impactful breakthroughs that are changing the outcome for people facing disease.

You can give your career the ultimate head start by joining us at the Perkins. Be part of a learning environment that fosters excellence and innovation to help students develop the tools needed to succeed.

Student Scholarships

The Perkins offers a number of scholarships to support high-achieving students wanting to further their career in medical research.

Students must enrol for their degree through a Western Australian university and undertake their research at the Harry Perkins Institute of Medical Research under the supervision of a Perkins researcher.

Our Research Development Office can help with applications for top-up scholarships while you're undertaking a research project at the Perkins.

Perkins Vacation Scholarships provide students with an exciting opportunity to learn valuable skills and sample real-life medical research in the labs of leading scientists.

If you are considering postgraduate research, contact study@perkins.org.au about a project opportunity and they can assist you in applying for a **6-week vacation scholarship.**

Vacation scholarship applications opens 19 August - 15 October 2025. These scholarships are run over the Summer period.

Click here to learn more and apply.

CANCER PROGRAM

Student Project Opportunities

Perkins cancer researchers investigate some of the toughest to treat cancers, such as triple-negative breast cancer, liver cancer and melanoma. Listed below are some of the student projects that you could contribute to.

Bioimaging Research and Innovation or Translational Engineering Laboratory (BRITElab)

Laboratory Head Dr Brendan Kennedy
brendan.kennedy@uwa.edu.au

Project 1: Handheld optical imaging probes for use in surgery.
Project 2: Developing novel optical methods to map tissue stiffness at high resolution.
Project 3: Visualisation and analysis of optical elastography images of cancerous tissue.
Project 4: Mechano-microscopy of tumour spheroids: mapping optical, biochemical and mechanical properties of cancer.

Cancer Epigenetics Laboratory

Laboratory Head Associate Professor Pilar Blancafort
pilar.blancafort@uwa.edu.au

Project 1: Manipulating the epithelial to mesenchymal transition by targeted epigenetic editing in breast cancer.
Project 2: Development of novel therapeutic strategies to silence oncogenic fusions in childhood sarcomas.
Project 3: Using Epi-CRISPR systems to sensitise breast and brain cancers to chemo and radiotherapies.
Project 4: Targeted epigenetic reactivation of dormant tumour suppressors in liver cancer.
Project 5: Development of a novel Epi-CRISPR platform to manipulate proimmunogenic and immune-suppressive genes in breast cancer.
Project 6: Epigenetic remodelling through the manipulation of Rab GTPases in breast cancer.
Project 7: Decoding the Molecular Signals Driving Breast Cancer Recurrence.

Laboratory for Cancer Medicine Laboratory Head

Professor Peter Leedman AO
peter.leedman@perkins.org.au

Project 1: Breast Cancer and novel therapies.
Project 2: Head and neck cancer and new treatments.
Project 3: Novel RNA-based therapies for liver cancer.

Translational Cancer Research and Liver Cancer Collaborative

Platform Lead Dr Louise Winteringham
louise.winteringham@uwa.edu.au

Project 1: Validating patient-derived organoids with clinical outcomes.

CARDIOVASCULAR SCIENCE AND DIABETE

Student Project Opportunities

The Cardiovascular Science and Diabetes Program at the Perkins is focussed on translational research to improve outcomes for heart disease, diabetes and kidney disease through research and biomedical engineering.

Advanced Clinical and Translational Cardiac Imaging Research Group Laboratory

Head Professor Girish Dwivedi
girish.dwivedi@perkins.uwa.edu.au

Project 1: Modifying gene expression to combat obesity and metabolic syndrome.
Project 2: Immunopathogenesis of sarcoidosis: Animal and human studies.
Project 3: Integration of artificial intelligence into arrhythmia care.
Project 4: Hassle-free heart disease screening; A non-invasive AI-based retinal imaging technology to screen for cardiovascular diseases.

Centre for Clinical Research in Emergency Medicine

Program Head Professor Daniel Fatovich
daniel.fatovich@health.wa.gov.au
Laboratory Head Dr Erika Bosio
erika.bosio@uwa.edu.au

Project 1: Modelling Sepsis pathophysiology: modelling human microvascular dysfunction to enable improvement of patient outcomes.
Project 2: Understanding Anaphylaxis: exploring the significance of unique genetic and cellular features of the condition.

Molecular Endocrinology and Pharmacology Laboratory

Laboratory Head Professor Kevin Pfleger
kevin.pfleger@uwa.edu.au
Team Leader Dr Liz Johnstone
liz.johnstone@uwa.edu.au

Project 1: Investigation of G Protein-Coupled Receptor Molecular Pharmacology.

GENOME BIOLOGY AND GENETICS PROGRAM

Student Project Opportunities

Perkins cancer researchers investigate some of the toughest to treat cancers, such as triple-negative breast cancer, liver cancer and melanoma. Listed below are some of the student projects that you could contribute to.

Chromatin & Ageing Laboratory

Laboratory Head Professor Ryan Lister
ryan.lister@uwa.edu.au

Project 1: Developing new molecular tools to edit the epigenome.
Project 2: Investigating epigenome reconfiguration during learning and memory.
Project 3: Artificial manipulation of human cell identity.

Disease Models and Therapies Team

Rhonda Taylor
rhonda.taylor@perkins.org.au

Project 1: Investigation of antisense ligonucleotides as treatments for muscle diseases.
Project 2: Modelling of patient phenotypes in 3D engineered skeletal muscle organoids.

Epigenetics and Ageing Laboratory

Laboratory Head Professor Alexey Terskikh
alexey.terskikh@uwa.edu.au

Project 1: How do we age as single cells? Investigating spatial and temporal trajectories of epigenetic and biological age in single cells using microscopic imaging.
Project 2: Cell heterogeneity during ageing (and rejuvenation). Does the 2nd law of thermodynamics apply to epigenetic information in single cells?
Project 3: Reprogramming vs transplantation induced rejuvenation: defining cell type-specific rejuvenation trajectories in different organs and tissues.
Project 4: Accelerating the pace: defining and manipulating epigenetic trajectories of human neuronal maturation at the single-cell level. **This is a joint project between the Terskikh and Lister labs.**
Project 5: Best of both worlds: connecting microscopic imaging and deep sequencing to understand human brain cell ageing. **This is a joint project between the Terskikh and Lister labs.**

Rare Disease Genetics & Functional Genomics Laboratory

Laboratory Head Professor Gina Ravenscroft
gina.ravenscroft@perkins.uwa.edu.au

Project 1: Identifying and characterising novel disease genes and variants in rare and neuromuscular diseases.
Project 2: Transactivation of neuromuscular disease genes in patient cells to study disease mechanisms.
Project 3: CRISPR validation of putative skeletal muscle regulatory regions.

Systems Biology and Genomics

Laboratory Head Professor Alistair Forrest
alistair.forrest@perkins.org.au

Project 1: Artificial intelligence-based medical data mining.
Project 2: Identifying novel intercellular signalling pathways to enhance cancer immunotherapy efficacy.
Project 3: Modelling combinatorial effects of experimental perturbations at single-cell resolution.
Project 4: Evaluating the collective probability of ligand-receptor interactions with distinct spatial distributions.
Project 5: Long non-coding RNAs and novel transcripts expressed in single cell and spatial transcriptomic cancer datasets.

Translational Renal Research Laboratory Laboratory

Head Dr Aron Chakera
aron.chakera@uwa.edu.au

Project 1: Developing novel diagnostics for the earlier detection and treatment of peritonitis.
Project 2: The role of mesothelial cells in peritoneal-dialysis associated peritonitis.
Project 3: Understanding bacterial factors that predict more severe disease.
Project 4: Using peritoneal dialysis as a uniquely accessible human system to study host-pathogen interactions linked to standardised clinical outcomes.

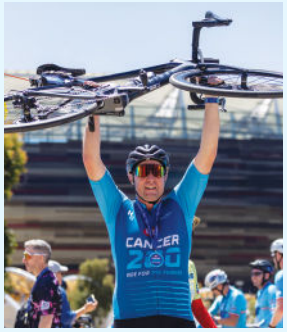
Join Our Community

Be Part of Something Special

You can learn more about the Perkins at one of our many community events. Come along to a Community Q&A panel discussion, sign up for an activity in the Lotterywest BioDiscovery Centre or take part in one of our major fundraising events.

The Perkins accepts volunteers in various areas of our operations. This includes office support in the community engagement and fundraising teams, and/or volunteering to support our major events.

For more information visit
perkins.org.au/get-involved



MACA Cancer 200 Ride for the Perkins

The MACA Cancer 200 is a two-day 200km bike ride that raises funds for Perkins cancer research. Together we can beat cancer.

cancer200.org.au

New Town Toyota Walk For Women's Cancer

The NTT Walk for Women's Cancer is not a race, it's a journey. Walk 35km through Perth and enjoy the friendly atmosphere of the event.

walkforwomenscancer.org.au

Perkins Plunge Powered by MinRes

Perkins Plunge units swimmers for a 12-hour overnight relay to raise critical funds to support WA researchers tackling cancer, heart disease, diabetes and rare genetic diseases.

perkinsplunge.org.au

HARRY PERKINS INSTITUTE
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Driving Discovery Delivering Hope

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