POSITION DESCRIPTION

THE UNIVERSITY OF MELBOURNE

Department of Anatomy and Physiology
Medicine, Dentistry and Health Sciences

Research Fellow

POSITION NO	0058313
CLASSIFICATION	Level A
SALARY	$77,171 - $104,717 p.a. (pro rata for part-time)
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full time
BASIS OF EMPLOYMENT	Fixed Term for 1 year Research - Externally Funded
OTHER BENEFITS	https://about.unimelb.edu.au/careers/staff-benefits
HOW TO APPLY	Online applications are preferred. Go to http://about.unimelb.edu.au/careers, select the relevant option ('Current Opportunities' or 'Jobs available to current staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	A/Prof Garron Dodd Tel +61 3 9035 3918 Email garron.dodd@unimelb.edu.au *Please do not send your application to this contact*

For information about working for the University of Melbourne, visit our website:
about.unimelb.edu.au/careers

Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi Wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

Position Summary

An opportunity exists for a PhD qualified research scientist with specialised skills in neuroscience and metabolism. The Research Fellow will undertake research within a team that is funded by NHRMC and ARC research grants to explore the neuronal control of metabolism and its contribution to metabolic diseases such as type-2 diabetes and obesity. These projects are led by A/Prof Garron Dodd.

They aim to develop new knowledge and technologies to understand how metabolic hormones (insulin, leptin) work in the brain and what brain cells are important (neurons, neuroglia, endothelial cells) to develop new treatments for metabolic disease. This work will have a strong focus on neuroscience and will explore the brain using in vivo calcium imaging, optogenetics, and CRISPR/Cas-9 technologies. The successful candidate will employ Simultaneous Pharmacodynamics/kinetics And Neural Activity Recoding (SPANAR), a world first technology developed by the Dodd Laboratory to assess cell-specific, real-time pharmacodynamics of drug signaling *in vivo*.

The Research Fellow will integrate into the research and scholarship activities of the laboratory, contributing to the preparation of successful funding applications and research publications and assisting with the supervision and training of research higher degree and undergraduate research students. Attention to detail and accurate record-keeping will be essential for this position.

The School of Biomedical Sciences and its Departments foster a values-based culture of innovation and creativity to enhance the research performance of the University and to achieve excellence in teaching and research outcomes.

We invest in developing the careers and well-being of our students and staff and expect all to live our Faculty Values of:

- Collaboration
- Compassion
- Respect
- Integrity

- Accountability

1. Key Responsibilities

1.1 RESEARCH AND RESEARCH TRAINING

- Participate in research independently and as a member of a research team.
- Perform *in vivo* and *in vitro* research experiments related to metabolism, including but not limited to techniques such as cell culture, molecular biology, RNA/protein extraction, western blotting, quantitative real-time PCR, stereotaxic surgery, immunohistochemistry.
- Contribute to data collection and analysis, using specialised programs for qualitative/quantitative data assessment such as GraphPad Prism.
- The co-production of conference and seminar papers and publications and attendance and presentations at conferences and seminars where appropriate
- The steady development of an academic research profile in the area of metabolic neuroscience.
- Contribute to publications arising from scholarship and research, such as publications of books and in peer-reviewed journals
- Active participation in the communication and dissemination of research where appropriate
- Occasional contributions to teaching within the research field where appropriate
- Contributing to the preparation of successful funding applications

1.2 LEADERSHIP AND SERVICE

- Actively participate at School and/or Faculty meetings and with guidance, contribute to planning activities or committee work to support capacity-building in the School/discipline.
- Active involvement in laboratory meetings. Perform administrative and operational duties as directed, related to the conduct of safe laboratory practices, the ordering of consumables and labware, management of mouse colonies and performing technical tasks in the laboratory.
- Effective training of research support staff where required.
- Participate in community and professional activities related to the relevant disciplinary area.
- Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity.
- Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 4.

1.3 RESPONSIBILITY AND COMPLIANCE

- Maintain a sound knowledge of current University Policy and Procedures, and reliably follow these or provide compliant advice to others;
- Reliably follow communications protocols and/or policies as appropriate.

- Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in Section 5.
- Behavioural Expectations - All staff are expected to maintain the following behaviours:
  - Treat everyone equitably; act fairly with staff and demonstrate respect for diversity
  - Be an effective team player who is cooperative and gains the trust and support of staff, peers and clients through collaboration.
  - Create ethics applications and report to the ethics committees

2. Selection Criteria

2.1 ESSENTIAL

- A PhD in neuroscience or relevant discipline
- Experience working with small laboratory animals (including handling, anaesthetisation and surgery) and conducting animal-based research experiments involving animal treatments and monitoring.
- Demonstrated proficiency in conducting stereotaxic surgery in mice to deliver adeno-associated viruses to specific brain regions.
- Demonstrated experience and expertise in immunohistochemistry/immunofluorescence , molecular biology, RNA extraction and quantitative real-time PCR; protein extraction, gel electrophoresis, immunohistochemistry and western blot techniques.
- A proven ability to work with senior researchers to help design, perform and analyse experiments in a timely manner.
- Demonstrated ability to contribute to independent and team-based research in metabolic neuroscience.
- Demonstrated excellent verbal and written communication skills for effective research collaboration and engagement.
- Demonstrated ability to manage competing priorities and excellent time management skills.
- Strong evidence of ability and desire to build an academic career trajectory.

2.2 DESIRABLE

- Demonstrated potential to supervise or co-supervise and mentor undergraduate, honours and graduate diploma stage postgraduate students where appropriate.
- Experience in *in vivo* two-photon calcium imaging and/or mass spectrometry.
- Expertise in the blood-brain barrier and/or the extracellular matrix.

2.3 SPECIAL REQUIREMENTS OF THE ROLE

- A willingness to work occasionally outside of normal hours (e.g. occasional weekends and evenings) where the completion of laboratory experiments is deemed necessary.

3. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion, and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the Advancing Melbourne strategy that addresses diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Advancing Melbourne.

4. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

https://safety.unimelb.edu.au/people/community/responsibilities-of-personnel

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. Other Information

5.1 THE DEPARTMENT OF ANATOMY AND PHYSIOLOGY

In January 2021, a consolidation occurred within the School of Biomedical Sciences that amalgamated the former Departments of Anatomy and Neuroscience and Physiology into the Department of Anatomy and Physiology. The three previous departments had long and proud histories and have now come together to produce one department with a remarkable breadth and depth in research expertise, whilst retaining our teaching programs that are widely recognised for our innovation in teaching, both through the development of online resources and in the use of active learning approaches in face-to-face teaching. Constant review and refinement of the curriculum and educational methods ensures that we best prepare students for scientific independence as they enter graduate and postgraduate professional and research careers, which we are continuing to enhance by moving to a more student-focused, active learning model.

The Department of Anatomy and Physiology's key research themes are neuroscience, metabolism and diabetes, muscle and cell biology. The goal of the combined department is to remain at the forefront of scientific research aimed at understanding the structure and function of the human body in health and disease, employing novel and imaginative research methods.

Our synergies in teaching extending beyond award programs to custom education programs focused on health professionals and industry. The former Department of Anatomy and Neuroscience had already initiated the ***Melbourne Academy of Surgical Anatomy*** in 2020, which has potential to be the largest of its kind in the southern hemisphere, underpinned by one of the largest donor programs in the country established to support the teaching and study of anatomy.

Our Department also hosts the Australian Phenomics Network Histopathology and Organ Pathology Service, providing detailed histological phenotyping and digital scanning of data from mutant mice. Our researchers are in the Triradiate Medical Building and the Melbourne Brain Centre, and has excellent research facilities, including confocal and live cell imaging microscopes, laser capture dissection, tissue culture, histology, flow cytometry, electrophysiology and molecular biology.

5.2 SCHOOL OF BIOMEDICAL SCIENCES

www.biomedicalsciences.unimelb.edu.au

As part of the Faculty of Medicine, Dentistry and Health Sciences since 2015, the School comprises three Departments, Departments of Anatomy and Physiology, Biochemistry and Pharmacology, and Microbiology and Immunology. It has 85 research groups across the three departments, awarding-winning teachers and more than 2500 equivalent full-time student enrolments each year.

Our Mission

Create an innovative and inclusive academic environment building on a strong legacy of world-class excellence and lay the foundation for new generations of biomedical researchers to create new knowledge and lead the revolution in biomedicine and realise their dream of advancing human health locally and globally.

Our Vision

- Promote collegiality and an inclusive academic environment through the engagement of partners, institutes, hospitals, industries, government and the community at large.
- Cultivate the highest level of excellence in research and education.
- Attract and develop a diverse and talented academic workforce.
- Lead the revolution in biomedicine and translate research outcomes into life transforming healthcare.
- Strengthen our intellectual and technological environment through interdisciplinary interactions, integration of resources and creative thinking.
- Seize all opportunities to create the conditions for sustainability.
- Observe the highest standards of ethics and integrity.

5.3 FACULTY OF MEDICINE, DENTISTRY AND HEALTH SCIENCES

www.mdhs.unimelb.edu.au

The Faculty of Medicine, Dentistry & Health Sciences has an enviable research record and is the University of Melbourne's largest faculty in terms of management of financial resources, employment of academic and professional staff, teaching of undergraduate and postgraduate (including research higher degree) students and the conduct of basic and applied research. The Faculty's annual revenue is $628m with approximately 55% of this income related to research activities.

The Faculty has a student teaching load in excess of 8,500 equivalent full-time students including more than 1,300 research higher degree students. The Faculty has approximately 2,195 staff comprising 642 professional staff and 1,553 research and teaching staff.

The Faculty has appointed Australia's first Associate Dean (Indigenous Development) to lead the development and implementation of the Faculty's Reconciliation Action Plan (RAP), which will be aligned with the broader University – wide plan. To enable the Faculty to improve its Indigenous expertise knowledge base, the Faculty's RAP will address Indigenous employment, Indigenous student recruitment and retention, Indigenous cultural recognition and building partnerships with the Indigenous community as key areas of development.

5.4 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers

5.5 ADVANCING MELBOURNE

The University's strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University's commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

- We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.
- We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.

- We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.
- We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne's academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes; place, community, education, discovery and global.

5.6 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at https://about.unimelb.edu.au/strategy/governance