



POSITION DESCRIPTION

Department of Anatomy and Physiology
Faculty of Medicine, Dentistry and Health Sciences

Postdoctoral Research Fellow

POSITION NO	0059103
CLASSIFICATION	Level A or Level B Research Fellow
SALARY	Level A \$97,558 - \$104, 717 p.a. Level B \$110,236 - \$130,900 p.a.
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full time (1.0 FTE)
BASIS OF EMPLOYMENT	Externally funded research project fixed term for 2 years with the possibility of further extension pending success of external research funding.
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	Professor Ethan Scott Email ethan.scott@unimelb.edu.au <i>Please do not send your application to this contact</i>

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

The lab (led by Professor Ethan Scott) uses a very broad experimental platform, ranging from optical physics to mathematics, to discover and describe brain function and behaviour. This work hinges on brain-wide cellular-resolution calcium imaging in the zebrafish model system, complemented by anatomical descriptions, targeted optogenetic manipulations, mathematical modelling, and behavioural analysis. Our goals are both basic (the elucidation of sensory pathways) and translational (the circuit-level modelling of autism endophenotypes), and we welcome new members with either focus.

This work is challenging and rewarding, and best suited to researchers who value broad, interdisciplinary approaches to big questions in neuroscience. Culturally, our lab values diversity in all forms, and cultivates a mutually supportive and collaborative atmosphere.

This position is for a neuroscientist, with projects focussed on sensory processing networks in zebrafish. The successful candidate will help to lead our efforts in describing how brain-wide sensory networks function to produce behaviour. This may involve meshing functional and anatomical data, the modelling information flow through sensory networks, and/or the optogenetic tests of the resulting models. Experimental manipulations, such as the mutants with relevance to psychiatric disorders or the exploration of sensory plasticity, are also within scope. As such, the successful candidate must be well organized, a good communicator, capable of leading a small group compassionately, and flexible in experimental design.

Researchers with past experience in advanced microscopy, molecular biology, anatomy, neuroscience, and computational biology are all welcome to apply, but it is expected that the appointee will eventually span a number of these fields, once established in the lab. Your projects will be developed to take advantage of your existing experience while allowing growth and development, and your ideas for your own projects (within the lab's current broad interests) are welcome. All of your work will be supported by expert microscope engineers and mathematicians in the lab.

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 wellbeing 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

- ▶ With broad direction from the Professor Ethan Scott support research and experiments toward understanding sensory perception, central processing, and behaviour at the levels of circuits and brain-wide networks.
- ▶ Prepare high quality papers and contribute to the rich academic environment of the laboratory and the Department.
- ▶ Collaboration with a multi-disciplinary research team and with researchers.
- ▶ Actively participate in professional activities including attendance at conferences and seminars in the field of expertise as required.
- ▶ Assist with preparing research proposal submissions to external funding bodies.
- ▶ Keep clear and accurate records and ensure effective record keeping and data management.

In addition to the above, the Research Fellow, Level B appointee will be required to:

- ▶ Develop and manage a research program consistent with the needs of the group and the agreed research program.
- ▶ To produce high quality research outputs in peer review journals including methodological and empirical research findings.
- ▶ To disseminate research findings through presentations at conferences and other public forums.
- ▶ Provide input into decisions about future studies including the sourcing of potential funds and the development of independent or collaborative grant applications.
- ▶ Manage materials for ethics submissions and relevant data.
- ▶ Supervision of postgraduate and research higher degree students as required.

1.2 LEADERSHIP AND SERVICE

- ▶ Acquire and maintain familiarity with relevant scientific literature and share this expertise with other members of the group.
- ▶ Contribute to an inclusive, cooperative, and affirmative culture within the group.

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.

2. Selection Criteria

2.1 ESSENTIAL

- ▶ PhD in physics, molecular biology, genetics, neuroscience, mathematics, or relevant related fields.
- ▶ Expertise and a strong track record in optical physics/engineering, neuroscience, calcium imaging, image analysis, OR the mathematical modelling of complex systems.
- ▶ Research experience including writing research proposals, conducting literature reviews, conducting research and writing manuscripts.
- ▶ Demonstrated high level communication skills (written and verbal).
- ▶ A demonstrated capacity to work collaboratively in a multidisciplinary team environment.

In addition to the above, the Research Fellow, Level B appointee will be required to:

- ▶ Experience contributing to peer review publications, conference presentations and the preparation of research grant applications commensurate with opportunity.
- ▶ Demonstrated ability to work within a research team to achieve project goals.

2.2 DESIRABLE

- ▶ Experience publishing peer reviewed research publications
- ▶ Experience in scientific presentation at an international level.
- ▶ Experience with coding in Matlab, Python, or other related languages.

In addition to the above, the Research Fellow, Level B appointee will be required to have:

- ▶ Record of high-profile first-author publications.
- ▶ Experience attracting or participating in research grants or funding.

2.3 SPECIAL REQUIREMENTS OF THIS POSITION

- ▶ This position may require weekend work due to equipment accessibility and experimental timing, and the successful candidate may also be required to travel between different laboratories to gain access to equipment.

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 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>

5.4 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.

5.5 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>