POSITION DESCRIPTION



Department of Anatomy and Physiology

Faculty of Medicine, Dentistry and Health Sciences

Postdoctoral Fellow (2 positions)

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| Position No | 0056212 |
| Classification | Research Fellow Grade 1, Level A |
| Salary | $77,171 - $104,717 p.a. |
| Superannuation | Employer contribution of 17%  |
| WORKING HOURS | Full-time  |
| BASIS OF EMPLOYMENT | 12 months, with potential for extension subject to funding |
| Other Benefits | <http://about.unimelb.edu.au/careers/working/benefits> |
| How to Apply | Online applications are preferred. Go to [http://about.unimelb.edu.au/careers](http://hr.unimelb.edu.au/careers), select the relevant option (‘Current Staff’ or ‘Prospective Staff’), then find the position by title or number. |
| contactFor enquiries only | Professor Janet KeastTel: +61 3 8344 5805Email: janet.keast@unimelb.edu.auPlease 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

Position Summary

Our team led by Professor Janet Keast and Dr Peregrine Osborne is seeking motivated PhD-qualified research scientists who have

* Training in neuroanatomy or developmental biology
* Extensive experience in preparing tissue samples from rodents or human donors for advanced immunofluorescence or electron microscopy
* High level skills in digital microscopy and image analysis

You will contribute to an international research program, which includes our team’s participation in two major research consortia funded by the US National Institutes of Health —SPARC (sparc.science) and GUDMAP (gudmap.org) — and our Melbourne-CNRS network collaboration with the Chédotal Laboratory at Institut de la Vision and Sorbonne University, France.

Our research focuses on using multiscale anatomical visualisation and mapping to study the neural and vascular systems of the bladder and related pelvic organs—using tissue samples from both developing and adult rodents, and human donors. Some of the innovative techniques we use include neural tracing with engineered adeno-associated viruses, large-sample tissue-clearing and immunofluorescence, confocal and light-sheet microscopy, serial block face scanning electron microscopy, and image analysis/visualisation using commercial (Imaris, Neurolucida, Vesselucida) and custom open-source software. We are seeking applicants who have some of the high-level skills relevant to this research and can demonstrate a capacity to extend or rapidly acquire new expertise in techniques used in our program.

New Research Fellows will integrate into the research and scholarship activities of the team and our international collaborators, 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. We expect successful applicants will be provided opportunities for career development by engaging with our international network of collaborating early-career and senior researchers, commercial companies (MBF Biosciences) and NIH program coordinators.

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 by our Faculty Values of:

* Collaboration
* Compassion
* Respect
* Integrity
* Accountability

# Key Responsibilities

## research and research training

* Design and conduct the required research effectively and efficiently in the time frame of the supporting funding and under limited supervision
* Develop effective timelines and milestones based on goals of the research program
* Plan and carry out experiments focused on completion of research project aims to meet agreed timelines and milestones.
* Independently collect, manage and analyse quantitative data, prepare figures and reports for publications
* Capacity and willingness to work independently or with other members of the team, as required.
* Publish and present research work in refereed journals, books, conference and seminars, reports etc.
* Maintain accurate experimental records and laboratory books
* Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 5.

## leadership and service

* Contribute to the research culture of the Department and host laboratory through attendance at meetings or seminars relevant to the team’s activities and the Fellow’s research expertise.
* Undertake an involvement in professional activities, including contributions to conferences and seminars in the field of expertise.
* Assist with the training and supervision of other research staff and students
* Contribute to the preparation and management of research grants and identification of sources of funding to support relevant individual or collaborative projects.

##  ENGAGEMENT

* Active participation in some outreach activities relating to research and scholarship
* Effective liaison with external networks to foster collaborative partnerships
* Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 5

# Selection Criteria

## Essential

* A PhD level qualification in neuroscience, developmental biology or other disciplines providing relevant training
* A developing research profile, as evidenced by data collection for, writing and publication of original research in peer-reviewed international journals, conference and seminar presentations.
* Demonstrated experience in performing immunohistochemical and microscopy experiments on neural tissues and/or organs, producing reliable, high-quality, quantifiable outcomes.
* Excellent fine motor skills, as required for handling small samples or performing microsurgical procedures under a dissecting microscope
* Highly developed attention to detail and demonstrated ability to keep accurate records.
* Strong communication skills (oral and written English) and excellent interpersonal skills
* Demonstrated ability to work both independently and collaboratively as part of a team, with a proven ability to plan, develop, prioritise and coordinate laboratory experiments
* Awareness of OHS responsibilities and willingness to attend OHS training as required.

## DESIRABLE

* Computational expertise specifically directed to image processing (development of new protocols, segmentation, quantitation of structural parameters, 3D reconstruction).
* Demonstrated expertise in performing small animal surgery, with the appropriate post-surgical monitoring and treatment

# Job Complexity, Skills, Knowledge

## Level of Supervision / Independence

The incumbent will work under routine supervision to general direction depending upon experience and the complexity of the tasks.

## Problem Solving and Judgement

The incumbent is expected to solve problems through the application of theoretical principles and techniques, requiring a moderate level of judgement and problem-solving skills, based on the requirements of the specific task (experiment or organizational task). The incumbent will be required to participate in several projects and tasks, often with competing timelines. Exceptional time management skills and the ability to prioritise competing demands are essential.

## Professional and Organisational Knowledge

The incumbent is expected to perform tasks/assignments that require proficiency in the work area's rules, regulations, policies, technical procedures, systems and processes.

The incumbent is required to develop comprehensive knowledge of the OHS and risk management policies and procedures of the University of Melbourne.

## Resource Management

The incumbent will manage or assist with the processing of tissue samples and associated documentation, as generated in the laboratory or provided by collaborators. The incumbent will also manage or assist with maintaining laboratory records and databases relating to research data, tissue storage, reagents and other laboratory items. The incumbent will liaise with other professional staff and external suppliers in the acquisition of laboratory reagents, consumables and equipment.

## Breadth of the position

The position is located in the laboratory co-directed by Prof Janet Keast and Dr Peregrine Osborne.

# 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 University’s People Strategy 2015-2020 and policies that address 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 Growing Esteem.

# 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:

<http://safety.unimelb.edu.au/topics/responsibilities/>

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

# Other Information

## ANATOMY AND Physiology

<https://biomedicalsciences.unimelb.edu.au/departments/anatomy-and-physiology>

The Department of Anatomy and Physiology has only recently come into fruition and is an amalgamation between the Departments of Anatomy and Neuroscience and the Department of Physiology. Both Departments have long and illustrious history and have come together to produce a Department with a remarkable breadth and depth in research expertise that underpin our key research themes of neuroscience, metabolism and cardiovascular sciences, muscle biology, and cell biology. The increase in critical mass of our researchers will also help position the Department as a key partner for Medical Research Future Fund (MRFF) and other large-scale grant applications relating to chronic, developmental, and degenerative diseases. 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.

We 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.

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 hadalready 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.

Physiology brings its considerable experience in the digital learning space. By combining expertise, it is envisioned that the Department of Anatomy and Physiology will be able to develop custom programs for health professionals and industry relevant to priority health challenges, such as cardiorespiratory and metabolic disorders.

Our Department also hosts the Phenomics Australia Histopathology and Slide Scanning 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 have access to excellent research facilities, including confocal and live cell imaging microscopes, laser capture dissection, tissue culture, histology, electrophysiology and molecular biology.

## SCHOOL OF BIOMEDICAL SCIENCES

<https://biomedicalsciences.unimelb.edu.au/>

The School of Biomedical Sciences is one of the most prominent and diverse Schools in the Faculty of Medicine, Dentistry & Health Sciences and is comprised of three Departments - Anatomy and Physiology, Biochemistry and Pharmacology, and Microbiology and Immunology.

The School is situated on the University’s Parkville Campus and is part of the largest biomedical precinct in the southern hemisphere, providing access to world class research facilities for staff and students.

The School fosters a values-based culture of innovation and creativity to achieve research and teaching excellence.

## Faculty of Medicine, Dentistry and Health Sciences

[www.mdhs.unimelb.edu.au](http://www.mdhs.unimelb.edu.au)

The Faculty of Medicine, Dentistry and Health Sciences (MDHS) plays a vital role in the delivery of the University of Melbourne’s Strategic Plan 2015-2020: Growing Esteem by providing current and future generations with education and research equal to the best in the world. It is Australia’s largest and leading biomedical research faculty. It employs more than 1,700 members of staff, has more than 8,000 students, and total revenue of $607 million for 2015. Reflecting the complexity of today’s global health landscape, the Faculty is made up of six different Schools and four Strategic Research Initiatives, and draws together all areas of human health, ranging from the most basic to the most applied areas of research. The Faculty contributes close to 50 per cent of research conducted at the University.

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.

## 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>.

## 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.

## 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>