TECHNICAL OFFICER – ELECTRON MICROSCOPY

POSITION NO 0053059

CLASSIFICATION UOM 7

SALARY $96,002 - $103,921 p.a (pro-rata for part-time)

SUPERANNUATION Employer contribution of 17%

WORKING HOURS Full-time (0.5 FTE)

BASIS OF EMPLOYMENT Continuing

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, select the relevant option (‘Current Staff’ or ‘Prospective Staff’), then find the position by title or number.

CONTACT FOR ENQUIRIES ONLY Prof Eric Hanssen
Tel +61 3 8344 2449
Email e hanssen@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 country throughout Australia. The University recognises the unique place held by Aboriginal and Torres Strait Islander peoples as the original custodians of country and their continued connection to the land, waterways, songlines and culture. The University respects all Aboriginal and Torres Strait Islander People and warmly embrace those students, staff, Elders and collaborators who identify as First Nations
**Position Summary**

The Technical Officer will report to the head of the Ian Holmes Imaging Center – (IHIC) located at the Bio21 Molecular Science and Biotechnology Institute (Bio21 Institute) and is responsible for delivering electron microscopy (EM) related services and providing EM expertise, knowledge and training to internal researchers, students and external clients. The Technical Officer will also perform a range of technical activities related to the general maintenance of the facility (including but not limited to waste and OHS management), sample preparation for biological sample, and quality control. In addition, this position will be involved in the development, application, documentation and knowledge transfer of new EM capabilities and methodologies. The Technical Officer will work in a team environment and work closely with the facility head and other EM staff. They will be involved in ensuring the efficient use of resources, identifying future capability requirements, and will be proactive in increasing the client base for the facility.

**Key Responsibilities**

- Contribute to project delivery, services and meet deadlines and key milestones, through the provision of research support activities, including assisting with experiment designs, sample preparation, data acquisition, analysis/interpretation, presentation and documentation.
- In consultation with the head of IHIC of the centre, the incumbent makes significant contribution to short and long term strategic and operational planning of the centre by providing high level advice, policy recommendations, equipment submissions and performance reports.
- To have direct responsibility for the operation and performance of some of the biological electron microscopes and 3D EM and correlative workflows and their associated specimen preparation equipment and data analysis programs (hereafter called “these instruments/workflows”). (Which microscopes will depend on the relevant expertise of the appointee)
- Implement programs which ensure the longevity and optimum performance of these instruments/workflows
- Assist in the design and development of improvements to these instruments/workflows, as required, and in consultation with the head of IHIC
- Oversee the servicing of these instruments/workflows and in consultation with the head of IHIC

1.1 **PROVISION OF RESEARCH SUPPORT**

- Provide high-level expertise, advice, and assistance to Centre Users to undertake research projects using these instruments/workflows
- Acquire and analyse complex data at a high-level for University research projects using these instruments/workflows
- Acquire and analyse complex data at a high level for external clients using these instruments/workflows
- Provide expert information, advice, and support with development activities in collaboration with industry
1.2 PROVISION OF TRAINING

- Provide training and supervision of Centre Users in the safe and effective operation of these instruments/workflows.
- Produce technical documentation to support the training and safe operation of Centre instruments/workflows.

1.3 OPERATIONAL AND ADMINISTRATIVE MANAGEMENT

- Maintain appropriate safety and training records
- Provide material to be used on the centre website, as required
- Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 6

Selection Criteria

ESSENTIAL

- Tertiary qualification in biochemistry, molecular biology or related area of science
- Demonstrated knowledge and experience in setting up EM instrumentation as well as development, application, and documentation of new methods and capabilities to deliver high quality EM analysis.
- Deep understanding and practice of 3D electron microscopy of biological samples including tomography, array tomography and block face imaging
- Thorough knowledge of the theory and practice of biological sample preparation for EM and the theory and operation of transmission electron microscopes.
- Proven ability to set up, monitor, maintain, as well as demonstrate and train others in the proper use of instruments/equipment/facilities and related methods for EM analysis
- Excellent interpersonal and communication skills, and the proven ability to provide support for research staff through conducting both quantitative and qualitative experiments, processing, collating, and analysing data, assisting in interpretation of results and preparing reports.
- Ability to undertake research projects and maintain high quality records and documentation under the guidance of senior staff
- Demonstrated ability to work with a high level of independence and within a collaborative team research environment in a support role, with staff from diverse backgrounds
- Excellent organisational and time management skills with a proven ability to meet deadlines and manage multiple tasks and competing priorities.
- Experience in laboratory and chemical management
- Thorough knowledge of the theory and practice of biological sample preparation for EM and the theory and operation of transmission electron microscopes

DESIRABLE

- Experience in the development of new techniques that extend the capabilities of electron microscopy experiments, either through the development of new methodologies and/or instrumentation and/or software and/or theories
- Understanding of university organisation, structure, and environment
2.3 OTHER JOB-RELATED INFORMATION
- Occasional work out of ordinary hours

**Job Complexity, Skills, Knowledge**

**LEVEL OF SUPERVISION / INDEPENDENCE**
- The incumbent will work under the general supervision of the head of the Bio21 IHIC but will be expected to work independently on individual tasks.
- The incumbent will be expected to maintain a well organised technical management program in their area of responsibility and function in a responsive and timely fashion to meet the needs of the users of the Bio21 IHIC.
- The incumbent will need to make judgements on the actions required to rectify faulty equipment, including decisions on engaging commercial equipment service and maintenance contractors.

**PROBLEM SOLVING AND JUDGEMENT**
- The incumbent required the ability to show initiative and creativity when troubleshooting a broad range of complex technical problems. It is critical that prompt service be delivered to both internal and external customers.
- The IHIC is a busy environment and the incumbent will need to manage conflicting and competing demands. Sound judgement will be required.

**PROFESSIONAL AND ORGANISATIONAL KNOWLEDGE**
- A well-established understanding of the working environment in research laboratories.
- A sound understanding of effective ways of achieving goals in a timely manner.
- The incumbent will require a sound working knowledge of University and Institute policies and procedures, particularly those related to OH&S.
- The incumbent will be required to communicate effectively with the university and wider research community.
- Knowledge of commercial suppliers and procedures for the purchasing of consumables and routine communal equipment required for business incubator and research transfer facility.

**RESOURCE MANAGEMENT**
- The Technical Officer will have responsibility for the maintenance of the sample preparation lab within IHIC.

**BREADTH OF THE POSITION**
- The Technical Officer is expected to have a high level of competence and experience with EM instrument platforms and procedures. They will be expected to perform various analyses and develop research projects within the Facility under the supervision of senior
personnel. It is expected that they will be involved in the development and application of EM methods that involve the use of different types of EM systems.

**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**

**BIO21 INSTITUTE**

The University of Melbourne’s $140m Bio21 Molecular Science and Biotechnology Institute (Bio21 Institute) is a multidisciplinary research centre, specialising in medical, agricultural and environmental biotechnology.

Opened in 2005, the Bio21 Institute improves human health and the environment through innovation in biotechnology and related areas, driven by multidisciplinary research and dynamic interactions with industry. The Institute embraces commercialisation as a facilitator of innovation, skills development and economic outcomes. A key driver of
innovation is the Institute’s commitment to intellectual property protection, technology transfer and business incubation.

Accommodating more than 700 research scientists, students, industry participants and administrative staff, the Bio21 Institute is one of the largest biotechnology research centres in Australia.

The Bio21 Institute is the flagship of the Bio21 Cluster project, which includes 21 member institutions recognised for research excellence and translational outcomes in medical and biomedical science and biotechnology.

Purposes are to:
- Achieve biotechnology innovation through multidisciplinary research, genomics and strategic alliances/collaboration with academia and industry
- Attract outstanding scientists and technicians
- Establish core platform technology facilities accessible to diverse scientific and industry communities
- Engage industry and nurture the commercialisation of discoveries
- Support start-up companies through business incubation and entrepreneurship skills development
- Contribute employable skills and prepare research students and post-doctoral fellows for leadership in industry
- Translate research into community benefits (educational and economic)
- Provide a forum for community debate and dissemination of information on emerging bioscience and technology issues.

Information on the Bio21 Institute can be found at: [http://www.bio21.org](http://www.bio21.org)

**FACULTY OF SCIENCE**

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

Science at the University of Melbourne is among the most highly ranked Faculties of Science in Australia*. Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 53,000 alumni and is one of the largest faculties in the University comprising seven schools: BioSciences, Chemistry, Earth Sciences, Ecosystem and Forest Sciences, Geography, Mathematics and Statistics, and Physics.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, Office for Environmental Programs, Australian Mathematical Sciences Institute (AMSI) and home to numerous Centres.
Science manages more than $315 million of income per annum, with a staff base in the order of 290 professional staff, and more than 630 academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 9,700 undergraduate and 2,400 graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science). The Faculty of Science is a leader in research, contributing approximately $80 million in HERDC income per annum. The Faculty of Science is highly research focused, performing strongly in the ARC competitive grants schemes, often out-performing the national average. The Faculty of Science is currently growing its competitiveness and standing in the NHMRC space.

*Based on 2018-19 subject rankings by QS and Time Higher Education

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.

1.1 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 http://www.unimelb.edu.au/governance