



SENIOR RESEARCH OFFICER – CORRELATIVE LIGHT AND ELECTRON MICROSCOPY AND ADVANCED LIFE SCIENCE EM

DEPARTMENT/UNIT	Cryo EM Facility / Ramaciotti Centre
FACULTY/DIVISION	Faculty of Medicine, Nursing and Health Sciences
CLASSIFICATION	HEW Level 8
DESIGNATED CAMPUS OR LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

Monash is a university of transformation, progress and optimism. Our people are our most valued asset, with our academics among the best in the world and our professional staff revolutionising the way we operate as an organisation. For more information about our University and our exciting future, please visit www.monash.edu.

The **Faculty of Medicine, Nursing and Health Sciences**, is the largest faculty at Monash University, and offers the most comprehensive suite of professional health training in Victoria. We consistently rank in the top 40 universities worldwide for clinical, pre-clinical and health sciences.

We want to improve the human condition. That is our vision - it has no expiration date. Through academic health centres, other translational models and by educating the healthcare workforce of the future, our staff, students and alumni directly improve quality of life.

Setting the global health care agenda, the Faculty aspires to lead in all areas of research activity and influence local, national and international policy to improve health and social outcomes and health inequalities. We've made a major impact in the world of medical research and become globally recognised for our quality education of over 41,000 doctors, nurses, and allied health professionals.

We are ambitious and aim to maintain our position as a leading international medical research university. We're recognised for the breadth and depth of our research, for our commitment to translational research, for the quality and scale of our research capability, and as a thriving biotechnology hub.

To learn more about the faculty, please visit www.monash.edu/medicine.

The **Monash Ramaciotti Centre** is a leading facility for life sciences electron microscopy. It houses Australia's first Titan Krios microscope, a Helios G4 FIBSEM with Leica VCT500 cryo-stage, a Talos Arctica, as well as two 120keV TEMs and a FESEM. A suite of advanced sample preparation and other equipment is available, including

a Zeiss LSM900 Airyscan with Linkam cryo-stage, a Wohlwend high pressure freezer, Leica AFS2 and FC7 cryo-ultramicroscopes. The facility's expert team supports and collaborates on a large number of bio EM techniques ranging from standard SEM and TEM to immuno EM, correlative light and electron microscopy, cryo tomography and single particle analysis.

POSITION PURPOSE

The Senior Research Officer - Correlative Light and Electron Microscopy and Advanced Life Science EM uses specialist knowledge to develop and apply advanced EM techniques such as correlative light and electron microscopy and immuno-localisation to cell biology and microbiology projects for the Monash Ramaciotti Centre.

The Senior Research Officer - Correlative Light and Electron Microscopy and Advanced Life Science EM performs a range of complex technical activities that play a critical role in supporting the delivery of life sciences electron microscopy. This includes managing, overseeing and undertaking projects, developing new methods, and coordinating projects with collaborators, while ensuring a compliant and safe operating environment. The Senior Research Officer role also includes teaching and training of specialised EM techniques to the Monash and wider Australian and international community.

Reporting Line: The position reports to Head of the Monash Ramaciotti Centre

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

1. Manage, plan, coordinate and oversee EM projects in collaboration with Ramaciotti Centre users including applying experimental techniques and analyzing experimental data by drawing on specialist expertise and applying it in challenging and innovative ways
2. Develop new protocols for correlative light and electron microscopy and advanced life science electron microscopy and apply them to research projects
3. Teach specialised EM techniques such as 2D and 3D CLEM, protein localisation/immuno EM, and FIB-SEM nanotomography to Monash researchers and to the wider Australian and international EM community
4. Perform microscopy and related EM techniques including immuno EM, (cryo-) ultramicrotomy, high pressure freezing, and cryo-preparation
5. In consultation with the Facility Head:
 - a. develop standard operating policies and procedures and training programs along with supporting technical, operational, training and OHS documentation
 - b. implement programs that ensure the longevity and optimum performance of the instruments including managing the supply of consumables, spare parts and other materials necessary for the operation of the instruments
 - c. supervise service work on the instruments by Monash staff and external contractors
 - d. apply high level expertise to the design and implementation of improvements to the instruments
6. Contribute towards the general operation of the laboratory
7. Present results for publications, meetings and reports
8. Maintain an up-to-date knowledge of biological electron microscopy
9. Comply with University policy, procedure and protocols in relation to the nature of the research being conducted

10. Other duties as required within the scope of the classification of this position

KEY SELECTION CRITERIA

Education/Qualifications

1. The incumbent should possess
 - a postgraduate qualification or progress towards a postgraduate qualification in a life science, with extensive experience in a relevant field such as cell biology, anatomy, microbiology or biochemistry; or
 - an equivalent combination of relevant experience and/or education/training

Knowledge and Skills

2. Extensive work experience and expertise in microscopy, cellular imaging and electron microscopy
3. Experience in cellular imaging using electron microscopy and optical imaging techniques
4. Proven expertise in correlative light and electron microscopy and advanced life science electron microscopy
5. Demonstrated experience in using computer programs for correlative microscopy
6. Proven ability to analyse and communicate research outcomes
7. Demonstrated ability to solve problems and be creative
8. Proven ability to work independently and as part of a team
9. Demonstrated organisation and record keeping skills

OTHER JOB RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.