

 Australian National University	<h1>Position Description</h1>
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College/Division:	ANU College of Science
Faculty/School/Centre:	Centre for Advanced Microscopy
Department/Unit:	
Position Title:	Cryo EM platform Scientist
Classification:	ANU Officer Grade 8 (Technical)
Position No:	TBA
Responsible to:	Director, Centre for Advanced Microscopy
Number of positions that report to this role:	0
Delegation(s) Assigned:	TBA

PURPOSE STATEMENT:

The ANU College of Science (CoS) comprises 7 Research Schools, The BDSI and 2 Centres, Centre for Public Awareness and the Centre for Advanced Microscopy. Staff and students within the ANU College of Science conduct research and deliver a research-led education program that encompasses the entire breadth of the sciences, supported by extensive international networks and by world-class facilities. The College has a strong tradition of research excellence that has fostered distinguished Nobel Laureates and Kyoto Prize winners and that trains scientific leaders in disciplines in which the ANU is consistently ranked in the top twenty in the world.

The Centre for Advanced Microscopy (CAM) provides state-of-the art equipment and expertise to internal and external researchers, students and industry partners. CAM is part of the national grid of Microscopy Australia (MA) facilities, funded by the Commonwealth government under the National Collaborative Research Infrastructure Strategy (NCRIS), relevant state governments and with co-investment by the institutional partners. CAM's specialist staff will guide users towards appropriate sample preparation techniques and instrument allocation and support their research across all material and life science disciplines.

Position Dimension & Relationships:

The Cryo Electron Microscopy Platform Scientist will manage, maintain and operate instruments relevant to the cryo workflows at CAM with particular focus on cryo transmission electron microscopy. They will provide scientific advice to users of the facility in areas related to single particle analysis, (cryo) tomography and other aspects related to correlative cryo workflows, train new users in the proper usage of the relevant instrumentation, in sample preparation for cryo electron microscopy and the collection of high quality data and their analysis. They will be required to be involved in development of new single particle reconstruction, tomography and correlative microscopy workflows in collaboration with academic and/or industry scientists and other CAM staff members. Additionally, the successful candidate, in consultation with the Director and Operations Manager of CAM, will be responsible for efficient usage of the above-mentioned facilities and for identifying future capability requirements.

Role Statement:

Under the broad direction of the Director (CAM), the cryo EM platform scientist will:

1. Oversee and assist in the daily operation and maintenance of the Life Science facility within CAM with an emphasis on cryo TEM instrumentation including developing and updating risk assessment and the proper and efficient use of the instrumentation.
2. Provide high-level expertise, advice and assistance to stakeholders in experimental design, implementation, optimisation of workflows and data analysis for research publication in cryo EM projects (including single particle analysis, cryo tomography and correlative workflows).
3. Take responsibility for CAM user training and support on the relevant (cryo) EM and correlative research projects that training/SOP materials for the relevant instrumentation are readily available and updated.

4. Implement and/or develop new methods on relevant facility instrumentation and solve complex problems associated with cryo EM workflows and the processing software, as required.
5. Effective liaison with internal and external networks (Microscopy Australia facilities, external Universities, Government agencies, industry clients) to foster collaborative partnerships and engagement in committees within the national and international Microscopy community.
6. Actively participate in teaching and outreach programs, including high school and undergraduate/postgraduate courses as required.
7. Regularly attend and contribute to workshops/conferences related to discipline area within the Microscopy Australia network and beyond and incorporate those learnings into practice.
8. Contribute to the preparation of competitive grants for new equipment at CAM according to the strategic goals of the facility.
9. Provide administration support to the management team of CAM ensuring safe working practices and WHS requirements and ensure that compliance protocols for regulatory requirements are met.
10. Other duties as required, consistent with the classification of this position.
11. Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity.

SELECTION CRITERIA:

1. Progress towards or postgraduate qualifications plus extensive experience or equivalent combination of relevant experience and education/training in cryo EM applications.
2. Advanced expertise in structural biology and in using reconstruction algorithms (Relion, EMAN2, cryosparc or other)
3. Demonstrated advanced skills in providing expert high-level advice to key stakeholders and technical services for the operations of complex cryo EM equipment.
4. Demonstrated planning, supervisory and customer services skills including the ability to work effectively and collaboratively and to lead, motivate and educate team members, establish priorities and meet competing deadlines to achieve operational outcomes.
5. Experience in the development of new techniques in relation to electron microscopy experiments, either through the development of new methodologies and/or instrumentation and/or software associated with the above.
6. Highly developed written and oral communication skills with demonstrated ability to liaise and negotiate effectively with a wide and diverse range of people and to foster a harmonious team environment.
7. A demonstrated high-level understanding of equal opportunity principles and a commitment to the application of EEO policies in a University context.

Desirable:

8. Demonstrated experience in electron tomography, microED and cryo Focussed Ion Beam lamella preparation.
9. Demonstrated capacity to formulate and implement policy and contribute to strategic planning within a complex facility, including management of WHS and regulatory requirements and development of standard operating procedures.

Background Checking:

The ANU conducts background checks on potential employees, and employment in this position is conditional on satisfactory results in accordance with the [Background Checking Procedure](#) which sets out the types of checks required by each type of position.

Supervisor/Delegate Signature:		Date:	3.11.2020
Printed Name:	Melanie Rug	Uni ID:	U5139009

References:

[General Staff Classification Descriptors](#)

 Australian National University	<h1>Pre-Employment Work Environment Report</h1>
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Position Details

College/Div/Centre	CoS/Centre for Advanced Microscopy	Dept/School/Section	
Position Title	Cryo Electron Microscopy Platform Scientist	Classification	ANU Officer Grade 8
Position No.		Reference No.	

In accordance with the Occupational Health and Safety Act 1991 the University has a duty of care to provide a safe workplace for all staff.

- This form must be completed by the supervisor of the advertised position and forwarded with the job requisition to Appointments and Promotions Branch, Human Resources Division. Without this form jobs cannot be advertised.
- This form is used to advise potential applicants of work environment issues prior to application.
- Once an applicant has been selected for the position consideration should be given to their inclusion on the University's Health Surveillance Program where appropriate – see . http://info.anu.edu.au/hr/OHS/_Health_Surveillance_Program/index.asp
Enrolment on relevant OHS training courses should also be arranged – see http://info.anu.edu.au/hr/Training_and_Development/OHS_Training/index.asp
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see 'Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

<ul style="list-style-type: none"> • Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a regular or occasional part of the duties. 			
TASK	regular	occasional	
key boarding	x	<input type="checkbox"/>	
lifting, manual handling	<input type="checkbox"/>	<input type="checkbox"/>	
repetitive manual tasks	<input type="checkbox"/>	<input type="checkbox"/>	
catering / food preparation	<input type="checkbox"/>	<input type="checkbox"/>	
fieldwork & travel	<input type="checkbox"/>	x	
driving a vehicle	<input type="checkbox"/>	x	
NON-IONIZING RADIATION			
solar	<input type="checkbox"/>	<input type="checkbox"/>	
ultraviolet	<input type="checkbox"/>	<input type="checkbox"/>	
infra red	<input type="checkbox"/>	<input type="checkbox"/>	
laser	<input type="checkbox"/>	x	
radio frequency	<input type="checkbox"/>	<input type="checkbox"/>	
CHEMICALS			
hazardous substances	<input type="checkbox"/>	x	
allergens	<input type="checkbox"/>	<input type="checkbox"/>	
cytotoxics	<input type="checkbox"/>	<input type="checkbox"/>	
mutagens/teratogens/ carcinogens	<input type="checkbox"/>	<input type="checkbox"/>	
pesticides / herbicides	<input type="checkbox"/>	<input type="checkbox"/>	
OTHER POTENTIAL HAZARDS (please specify):			
TASK	regular	occasional	
laboratory work	x	<input type="checkbox"/>	
work at heights	<input type="checkbox"/>	<input type="checkbox"/>	
work in confined spaces	<input type="checkbox"/>	<input type="checkbox"/>	
noise / vibration	<input type="checkbox"/>	<input type="checkbox"/>	
electricity	<input type="checkbox"/>	<input type="checkbox"/>	
IONIZING RADIATION			
gamma, x-rays	<input type="checkbox"/>	x	
beta particles	<input type="checkbox"/>	<input type="checkbox"/>	
nuclear particles	<input type="checkbox"/>	<input type="checkbox"/>	
BIOLOGICAL MATERIALS			
microbiological materials	<input type="checkbox"/>	x	
potential biological allergens	<input type="checkbox"/>	<input type="checkbox"/>	
laboratory animals or insects	<input type="checkbox"/>	<input type="checkbox"/>	
clinical specimens, including blood	<input type="checkbox"/>	x	
genetically-manipulated specimens	<input type="checkbox"/>	x	
immunisations	<input type="checkbox"/>	<input type="checkbox"/>	

Supervisor's Signature:		Print Name:	Melanie Rug	Date:	3.11.2020
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