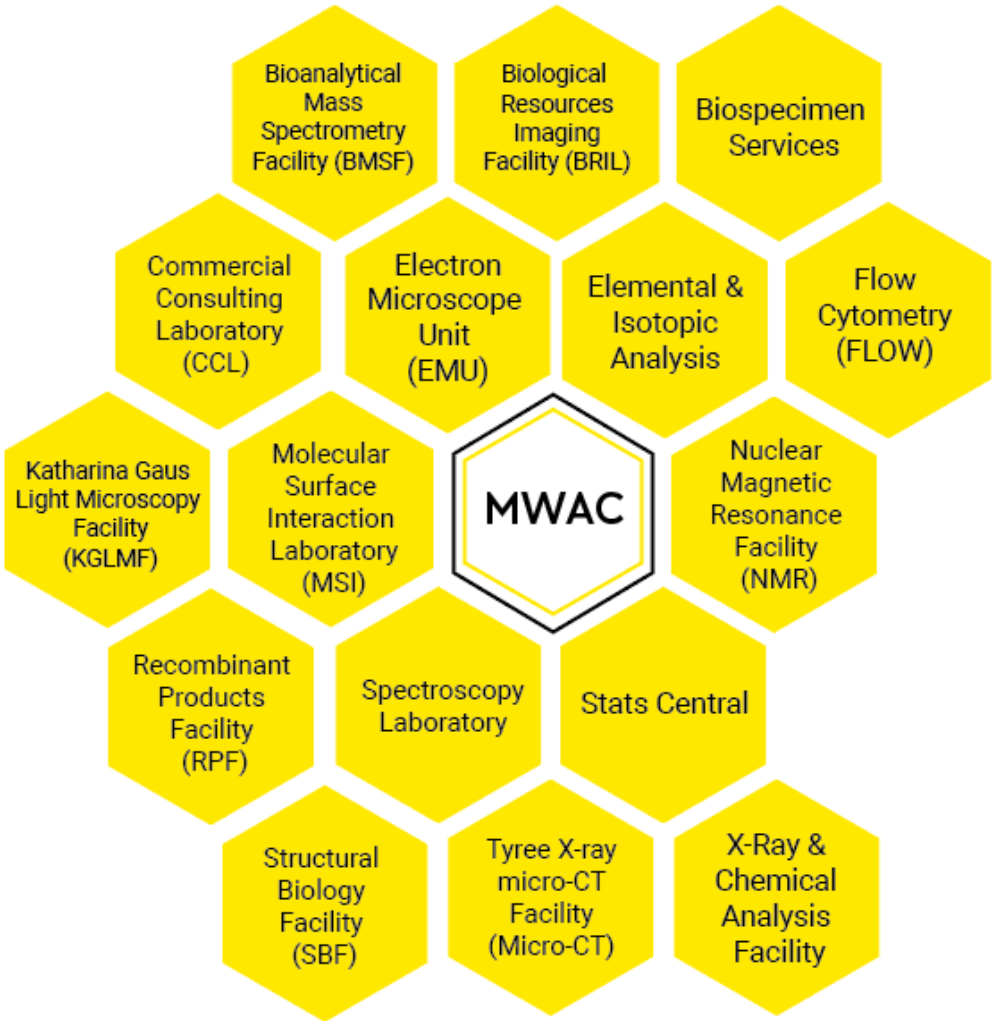
UNSW RESEARCH INFRASTRUCTURE

Mark Wainwright Analytical Centre

Advice for ARC and NHMRC Grant Applications Submitted in 2024

Who We Are



The Mark Wainwright Analytical Centre (MWAC) resides within the portfolio of the Pro-Vice Chancellor (Research Infrastructure) in the Division of Research and Enterprise and comprises 15 core research-support facilities housing high-end research instrumentation supporting STEM research. MWAC provides training and technical support for the instruments, and appropriate expertise for diverse research applications. Approximately 100 MWAC staff manage and maintain a diverse portfolio of research support instrumentation valued at about $100M with an annual budget commensurate with these operations. Statistics advice and training for STEM and other disciplines is offered by a dedicated statistical support unit, Stats Central.

Background

Budget information for grant applications submitted in 2024 is provided below. Unless otherwise specified, a CPI increase of 4% p.a. should be factored into budgets for multi-year grant applications such as ARC and NHMRC (i.e. for 2025 and beyond).

Overview – Instrumental Facilities

The MWAC can provide assistance for project grant applications, including ARC and NHMRC, in:

- Determining the appropriate types of instrumentation and experiments required for a project
- Determining the appropriate number of hours of instrument access required by a project
- Budgeting for instrument access charges and associated costs (e.g. sampling consumables)
- Specifying MWAC specialist support for method/technique development, implementation of novel/advanced experiments, training of project staff etc.
- Providing a clear statement of the extent to which access charges are subsidised by University and Government funding
- Providing advice on ancillary costs (e.g. sample preparation, project-specific accessories)

Statistics Advice

A leading consulting and support unit, Stats Central, is also part of MWAC. Our experience is that statistical issues can be a significant problem leading to unsuccessful grants. Statistical review by an experienced statistician can help avoid these problems. Stats Central is able to offer advice on statistical design and analysis issues. Additional information can be found at the following link:

Stats Central (sharepoint.com)

Links to access and pricing information

If your project proposal involves intensive use of instruments or significant method development in a particular lab, we encourage you to contact the relevant Head of Facility/Unit for further advice and a cost estimate for the project.

The MWAC Executive Director and Heads of Facility/Unit are happy to advise on the full range of experimental capabilities available for your project. New researchers and those planning to access particular facilities for the first time are strongly encouraged to seek specialist advice before incorporating these plans in their grant applications.

Biospecimen Services

Biospecimen Services (sharepoint.com)

BMSF (Mass Spectrometry, chromatography, iTC, nanoDSC)

Bioanalytical Mass Spectrometry Facility (BMSF) (sharepoint.com)

BRIL (pre-clinical imaging)

Biological Resources Imaging Facility (BRIL) (sharepoint.com)

BRIL (Flow Cytometry)

Flow Cytometry (FLOW) (sharepoint.com)

Chronos Radiocarbon Facility

Chronos Radiocarbon Facility (sharepoint.com)

Electron Microscope Unit

Electron Microscope Unit (EMU) (sharepoint.com)

KGLMF (Fluorescence microscopy and related bioimaging)

Katharina Gaus Light Microscopy Facility (KGLMF) (sharepoint.com)

Molecular Surface Interactions

Molecular Surface Interaction Laboratory (MSI) (sharepoint.com)

NMR (includes ESR)

Nuclear Magnetic Resonance Facility (NMR) (sharepoint.com)

Recombinant Products Facility (RPF)

Recombinant Products Facility (RPF) (sharepoint.com)

Spectroscopy Laboratory (Raman, FTIR microscopy, CD)

Spectroscopy Laboratory (sharepoint.com)

Stats Central

Stats Central (sharepoint.com)

Structural Biology Facility

Structural Biology Facility (SBF) (sharepoint.com)

Tyree X-Ray Micro-CT facility (Heliscan Micro-CT, Itrax XRF core scanner and visualization laboratory)

Tyree X-ray micro-CT Facility (Micro-CT) (sharepoint.com)

X-ray and Chemical Analysis (SSEAU) (Includes XRD, XPS, XRF, ICP)

Chemical Crystallography Laboratory (sharepoint.com)

Inductively Coupled Plasma - Elemental Analysis Laboratory (ICP) (sharepoint.com)

Surface Analysis Laboratory (SAL) (sharepoint.com)

X-ray Diffraction Laboratory (XRD) (sharepoint.com)

X-ray Fluorescence Laboratory (XRF) (sharepoint.com)

Instrument access charges will usually be the major cost for an experiment carried out in MWAC. Guidelines on incorporating these in your budget are given below for ARC and NHMRC applications.

Depending on the instruments and techniques involved, there may be other associated costs for running your experiments, including costs for specialist sample preparation (e.g. purified solvents) or for accessories and consumables (e.g. sample holders or chromatography columns). If necessary, contact the Director or Manager of the relevant facility to discuss your particular needs and for guidance on budgeting for specialised experiments.

MWAC staff will provide training for researchers and students to enable them to run their own experiments when appropriate. If you need advice on justification of personnel (e.g. what level of expertise might be required and hence what level of staff appointment is needed to support the project), discuss your specific needs with MWAC staff.

Occasionally, it may be appropriate for you to budget for samples to be run by MWAC staff. Talk to us for advice if you are considering this option.

Access to External Facilities

Your project may require access to experimental facilities not available at UNSW. MWAC may be able to advise on arrangements with other institutions via national networks (e.g. Microscopy Australia, NIF), LIEF partnerships or reciprocal access agreements. In most cases these are indicated on the MWAC website. Consult us for more information.

Current MWAC instrumentation and measurement capabilities are available from the instrument sections of our website: https://www.analytical.unsw.edu.au/instruments

Major equipment purchases can take up to a year to complete, so if the resources you require are not listed, don't hesitate to ask.

Acknowledging MWAC and relevant Units

Publications using data or facilities from MWAC should include the following statement in the Acknowledgements section:

"Some of the data presented in this work was acquired by personnel and/or instruments at the Mark Wainwright Analytical Centre (MWAC) of the University of New South Wales (UNSW), which is in part-funded by the Research Infrastructure programme of UNSW. "

All publications or presentations that arise from work carried out either in part, or in their entirety, within MWAC must include adequate acknowledgment of MWAC and the relevant Unit/Facility. Some Units may also require specific acknowledgment of funding sources (e.g. NCRIS) that have supported equipment infrastructure at MWAC: please refer to the respective Unit webpage for further guidance concerning this.

Acknowledgment is vital for tracking the impact we have on research, and research outcomes and outputs, at UNSW Sydney, and which helps justify the service(s) that we provide.

Contacts:

For a full list of contacts see https://www.analytical.unsw.edu.au/mwac-centre-offices/directors-and-heads-facilities

See next page for an examples of a grant application.

EXAMPLE 1, ARC Discovery

Budget

This example relates to a project that requires an average of 8 hrs per week of mass spectrometry (MS) for 40 weeks. Include a line item in the Budget Table D1 for the appropriate years, as shown below.

Other	
Proteomic mass spectrometry (320 hrs @ $30 / hr)	$ 9,600

Section E1; 'Justification of Funding'

"The research project requires the proteomic analysis of affinity pull-downs of subcellular fractions at the rate of 5 samples per week for 40 weeks in year 1, with an estimated 8 hours instrument time per 5 samples. The base operating cost for student-run MS at the BMSF is $90 / hr to which the university contributes $60 (for UNSW projects). The balance of $30/hr is requested from the ARC."

You must add further specific explanation of why mass spectrometry is essential for the research outcomes, for example: "Tandem MS combined with liquid chromatography (LC) is at present the most effective method of confident protein identification and the elucidation of post-translational modification of proteins."

EXAMPLE 2, NHMRC Ideas Grants

Budget

This example relates to a project that requires access to LC-MS for one batch of samples per week, at 4 hours per batch, for 45 weeks. This yields 180 h of instrument time and a total project cost of $5,400 at the subsidised internal rate of $30 per hour.

Add your calculated access fees for each year into your total Direct Research Costs and insert the total into the appropriate year box in Section B-PB: Proposed Budget. RGMS will automatically round the annual amounts to the nearest $5000. You should enter the exact budget figure required. Justify each item of Direct Research Costs by year in the space provided.

'Justification of Direct Research Costs'

"This research project requires the examination of one sample per week using advanced LC-MS with an estimated 4 hours per run at a subsidised cost of $30 per hour of instrument time."

You must add further specific explanation of why MS or other technique is essential for the research outcomes.