

# Advice to applicants for ARC & NHMRC grants

## Table of contents

Planning for your research .....	3
Helping your applications succeed .....	3
Which instrument/facility do I need? .....	3
About us .....	3
Payment schemes at your local facility .....	3
ARC example .....	4
NHMRC example .....	6
Budget justification .....	7

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### HOST INSTITUTIONS



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### FUNDED BY



## Planning for your research

This is a guide on how to include microscopy costs into your budget proposal for ARC and NHMRC grant applications. Each project at a Microscopy Australia facility incurs costs in terms of instrument time, preparation materials and staff input. A contribution towards these costs is expected from the users of our facilities. This guide will help you calculate these costs and justify your chosen technique and instrument. Our fees for academic research are subsidised to be affordable with typical Australian research grants.

## Helping your application succeed

Feasibility is one of the four assessment areas for ARC Discovery Program grants. Two feasibility criteria that Microscopy Australia can help you satisfy are:

- a budget that creates confidence in the timely and successful completion of the project
- a high quality research environment for your project and availability of necessary facilities

## Which instrument/facility do I need?

The TechFi™ is an online tool to help you find the facilities to fit your project: [micro.org.au/techniquefinder](https://micro.org.au/techniquefinder)

## About us

Microscopy Australia is a joint venture of university-based facilities brought together by Federal (NCRIS) and State government, and institutional, funding. We provide open access to microscopes and expertise distributed around the nation to keep Australia at the forefront of global research and innovation. Microscopy Australia partner institutions have agreed to make not just the NCRIS-funded instruments, but all of their microscopy facilities available to researchers.

We enable access to a vast array of techniques and instrumentation, including scanning electron microscopy, transmission electron microscopy, ion and spectroscopy platforms, scanned probe techniques, X-ray technologies, visualisation and simulation, light and laser optics and specimen preparation.

## Payment schemes at your local facility

**Beamtime on instruments is charged at \$30–\$120 per hour. These rates are set locally and published on the website of each Microscopy Australia facility – please visit the relevant website for details.**

Our facilities have various payment schemes including subscriptions, memberships and pay-as-you-go. If the example proposal below was successful, this researcher may spend the \$12,600 @ \$70 per hour on a pay-as-you-go basis or, alternatively, purchase an up-front subscription or membership to the relevant Microscopy Australia unit or centre.

We suggest that you calculate your costs on the hourly rates and use an amount equal to this as the matching in-kind contribution from the university. Depending on the amount requested, please use your discretion as to whether you feel that using the relevant subscription rate would be beneficial to your application. If you do choose to use the subscription rate, it is best to still include the calculated hourly rate to reflect the university's in-kind contribution.

Before final submission, contact the relevant facility to confirm budget details and project description.

## All Applications

You should attempt to estimate the time required per specimen. It is valuable to include separate estimates of time per technique when using more than one instrument. Your chosen Microscopy Australia facility will be happy to discuss your requirements. The following list shows a conservative estimate of time required per sample.

- Transmission electron microscopy: 3–20 hrs
- Scanning electron microscopy: 0.5–4 hrs
- X-ray diffraction: 1–24 hrs
- Confocal/atomic force microscopy: 3–20 hrs
- X-ray microtomography: 1–15 hrs
- Atom probe tomography: 6–12 hrs

## ARC example

Guidelines and application information for all ARC grants can be found on the Australian Government's [GrantConnect website](#). Grant proposals to the ARC must be submitted in their online [Research Management System \(RMS\)](#).

For ARC Discovery Project applications you should include a line item in the 'Project Costs' table (Part E, see screenshot below) under 'Other'.

In this example, the project requires access to microscopy for one sample per week, at 4 hours per sample, for 45 weeks in Year 1, which yields 180h of beam time. At \$70 per hour for access charges, this translates to a total cost of \$12,600 for AMMRF instruments for Year 1 of the project (see Step 2).

The host university maintains substantial infrastructure and the value of this is transmitted to research projects at a level at least equivalent to the instrument usage charges. So, the same total value as the ARC column should be added to the 'AdminOrg/In-Kind' column (see Step 3).

## Part E - Project Cost

### E1. What is the proposed budget for the project?

There are rules around the funding that can be requested from the ARC. You must adhere to the requirements that are specific to the grant opportunity as listed in the grant guidelines. It is important that the Administering Organisation participating in this application has been added at Part A3 prior to entering information in the budget table. Please refer to the Instructions to Applicants for detailed instructions on how to fill out the budget section. (This question must be answered)

#### Add Participant type

Higher Degree by Research stipend

Level 2 starting in year 1

Add



Year 1

Year 2

Year 3

Year 4

Year 5

Description		Australian Research Council	Administering Organisation	
		Cash	Cash	In-kind
Total		12,600		12,600
Personnel	+			
Teaching Relief	+			
Travel	+			
Field Research	+			
Equipment	+			
Maintenance	+			
Other	+	12,600		12,600
Advanced Microscopy and Microanalysis (@ \$70/h)	 	12,600	0	12,600

#### ARC Application Interface: Part E

**Step 1:** Click on the plus sign adjacent to the 'Other' row in the table. In the resulting text box, type 'Advanced Microscopy and Microanalysis (@ \$70/h)', then press the 'Add Item' button.

**Step 2:** Click on the Australian Research Council column of the new 'Advanced Microscopy and Microanalysis (@ \$70/h)' row and enter the required amount; \$12,600 in our example above.

**Step 3:** Click on the Admin Org In-kind column of the same row and enter the matching amount; \$12,600 in our example.

**Step 4:** Click on the next year, Year 2, above the budget table and then repeat steps 2 and 3, with the requested amount adjusted for the higher or lower microscopy needs of the different stages (years) of the project. Repeat the process for additional years.

NHMRC

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Main Menu
Favourites

Properties

Processes

Application:

Application Research Budget: APP\_BUDGET-

Hints & Instructions

Additional Information

https://nhmrc.gov.au/about-us/publications/rgms-training-program

Hints And Instructions For This Page

/niku/nu#action:gm\_hints\_instructions&odf\_view=b\_pb\_app\_budget

General

+

-

Item Type

Direct Research Costs

+

(50 character limit including spaces)

Item

Created By

Created Date

18/12/2018

Updated By

Last Updated Date

18/12/2018

Budget Data

Year 1 (SAUD)

50000

Year 2 (SAUD)

50000

Year 3 (SAUD)

45000

Year 4 (SAUD)

0.00

Year 5 (SAUD)

0.00

Justification

+

Justification

(500 character limit including spaces and line breaks.)

Save

Save And Return

Return

+

= Required

-

= Enter Once

NHMRC Application Interface: Research Budget

## NHMRC example

Guidelines and application information for all NHMRC grants can be found on the Australian Government's [GrantConnect website](#). Grant proposals to the NHMRC must be submitted in their online [Research Grants Management System \(RGMS\)](#).

For NHMRC Project applications go to the 'B-PBRF: Proposed Budget - Research Facilities' page found under 'Properties' and select 'No' from the drop-down menu. There is therefore no need to attach a PDF.

Add your calculated access fees for each year to the corresponding direct research costs and insert the total into the appropriate year box as circled below.

This example was calculated as follows: Assume \$36,619 worth of other, non-microscopy, direct research costs for Year 1.

The microscopy and microanalysis fee is \$12,600 for 180h of access (as per the ARC example). Adding these costs gives a total direct research cost of \$49,219 for Year 1, which gives \$50,000 when rounded up to the nearest \$5,000 quantum. This is entered in the relevant year of the 'New' form under 'B-PB: Proposed Budget – DRC and Equipment'.

Proceed in a similar manner for each year of the application, with the requested amount adjusted for higher or lower microscopy needs, and other direct costs, as required by the different stages of the project.

## Budget justification

On the next page there is example text provided to justify the ARC or NHMRC funding requested for use of Microscopy Australia's facilities.

For an ARC Discovery Project, the text should be included under the 'Other' section of Part F1, 'Justification of funding requested from the ARC', of the application in RMS.

For an NHMRC Project application, when you create a Direct Research Cost item on the page 'B-PB: Proposed Budget - DRC and Equipment' under 'Properties' you will be required to include a justification. Please include the appropriate text from below.

Remember: the more specific and detailed your budget justification, and the more clearly and directly it is linked to the project, the better your chances of having the ARC or NHMRC award a larger proportion of your total budget request. This applies to instrument-access charges as much as to any other essential costs.

For ARC Discovery Projects, don't forget to explain the 'matching' contribution from the Administering Organisation towards the microscopy and microanalysis access charges. This needs to be included under Part F2, 'Details of non-ARC contributions', of the application. For example: "The University provides on-going support to [specify a facility; e.g. the Australian Centre for Microscopy & Microanalysis] to maintain and operate instruments and provide expert support from technical staff. This cost represents a specific contribution to this project, at a level that is at least equivalent to the instrument usage charge (\$70 per hour in these examples)."

### **Instrument example 1 (\$50/h)**

“This research project requires the examination of N samples per week/month/year [as appropriate] with the advanced microscopy and/or microanalysis [as appropriate] technique/s of [specify; e.g. atom probe tomography]. The estimated time required for characterisation of each sample is X hours, at a cost of \$50 per hour of instrument time.” You should add further specific explanation of why the chosen microscopy technique/s is/ are necessary for the research, for example: “Atom probe tomography is a unique characterisation tool that is able to reveal elemental and structural detail at the atomic scale and is essential for exploring the structure-function relationships in these alloys with nanometre-sized grains” with a reference to further detail elsewhere in the application.

### **Instrument example 2 (\$70/h)**

“This research project requires the examination of N samples per week/ month/year [as appropriate] with the advanced microscopy and/or microanalysis [as appropriate] technique/s of [specify; e.g. confocal and fluorescence microscopy]. The estimated time required for characterisation of each sample is X hours, at a cost of \$70 per hour of instrument time.” You should add further specific explanation of why the microscopy is necessary and how it adds value to your research, for example: “Confocal and FLIM microscopies are essential to this project to elucidate the mechanisms of cellular apoptosis” with a reference to further detail elsewhere in the application.

**NB: Hourly rates for instruments are set locally and published on the website of each Microscopy Australia facility – visit the relevant website for details.**