Australian Government | ANSTO

ACNS & NDF Guidelines for Referees

G-7867

Introduction

Dear Reviewer,

Thank you for your support of the ACNS & NDF Proposal scientific review process. The following information is provided to assist in the reviewing process. Please contact the User Office NSW if you have any further questions or comments.

Purpose

This guideline provides information which may assist in the review of experiment proposals made to the Australian Centre for Neutron Scattering (ACNS) and National Deuteration Facility (NDF).

Scoring

Please score each proposal and include supporting comments for:

1. The quality of the science, and
2. The quality of the planned experiment

Scientific Merit

- This is concerned with the relevance of the science to the field and the importance of the proposed research. Refer to the table below for guidelines.
- For NDF proposals, the focus is usually on the science to be undertaken using the deuterated molecule (not the deuteration process) and the value of the outcomes assuming experiments using the deuterated molecule are successful. It is a requirement that the NDF proposals have defined experiments (e.g., access to instruments or research infrastructure) to ensure the use of the deuterated products. It is not a requirement that the experiment involve neutron scattering. It may involve other techniques including but not limited to NMR or infrared-based techniques.
- Score out of 10; contributes 65% to the overall score.

Score	Recommendation	Publication prospects if experiment is successful	Comments
10	Must do as soon as possible	Potential for *Nature/Science*	Could feature in a media release or ministerial brief if successful; would win a major prize if successful. Scientific or technical breakthrough; high profile, exciting broader impact; a major step forward to a scientific question. A strong justification is required from the reviewer when giving this score.
9	Must do	Headed for a leading discipline-specific journal (with JIF>6) e.g. *Phys. Rev. Letter, JACS, Angewandte Chemie;*	Will result in invited talks or feature in a major museum, trade, or other exhibit if successful; a reasonable incremental step forward; good solid science. A reasonable justification is

Score	Recommendation	Publication prospects if experiment is successful	Comments
		potential for significant intellectual property or commercial opportunities for ANSTO	required from the reviewer when giving this score.
8	Should do	Headed for a well-regarded discipline-specific journal with JIF>3 e.g. *Phys. Rev. Langmuir, Macromolecules, J. Molec. Biol, Biochemistry*	Worth giving a high-quality seminar about it if successful; an incremental step forward; good solid science. A reasonable justification should be given by the reviewer when assigning this score.
7	Should do	Immediately publishable	Worthwhile data collecting. Impactful.
6	Might do	Publishable	Data collection but without significant impact.
5	Might do	Publishable	Might be interesting, but unfocussed.
4	Possibly do	Publishable	Worthwhile but routine; could be done if time allows.
3	Strengthen scientific case and reapply in next round	Unlikely to be publishable	Marginal; questionable whether it's worth doing.
2	Do not give time	No prospect	Not worth doing, difficult to understand what they want to do.
1	Do not give time	No prospect	Not worth doing, unintelligible.
0	Investigation and/or reporting required	None	Evidence of plagiarism, fraud or other academic or ethical misconduct in the submission.

Planned Experiment

- Reflects, for example, if the use of the technique is appropriate and adequate? Does the proposal suggest an efficient use of samples(s) and sample environment? This includes consideration of use of requested deuterated products for the described experimental technique/s in NDF proposals. Have preliminary measurements been carried out and details provided?
- Score out of 10; contributes 35% to the overall score.

Comments

Your comments are welcome and will be shared with users (de-identified) to assist them with future proposals if unsuccessful. We welcome comments, but not limited to:

- Expanding on the reasons for your score (this is essential for very high or very low scores).
- If you consider a different instrument or technique would be more suitable.
- If you think the beam time or deuteration request is excessive or inadequate.
- If there are safety issues that have been overlooked in the proposal.

Additional notes on ACNS & NDF program proposals

ACNS & NDF program proposals are intended to enable a coherent program of research requiring a commitment of multiple time allocations or provision of multiple deuterated molecules/materials over a three-year period. Up to 25% of an ACNS instrument's beam time can be devoted to programs.

As well as the quality of science and quality of planned series of experiments, consider:

- Does the planned research fit the program category? Does it merit program status rather than a series of normal proposals?
- An indicative experimental plan only is requested for the three-year program. Detailed plans for each beam time allocation and/or deuteration product requests will be requested separately if a program proposal is approved.
- Will the participants quickly become sufficiently experienced to provide round-the-clock experimental support on the ACNS instruments for the whole program, with minimal support from ACNS staff?

Note: Unsuccessful program proposals will not be reconsidered as a normal single visit proposal for the coming schedule period.

Document History

Revision	Description of Changes	Date
0 - 3	Non-controlled document issues	Sept 2015
4	General revision and update; Convert to controlled document	29 Sept 2020
5	Update for the 2021-2 round	23 March 2021
6	Change the contact from Joseph Bevitt to the User Office NSW	20 August 2023
7	Update for 2025-1 round	1 October 2024