



Policy review of the National Competitive Grants Program

Submission to the Australian Research Council

17 May 2024

About Science in Australia Gender Equity (SAGE)

SAGE is Australasia's leading advocate for equity, diversity and inclusion (EDI) in the education and research sector. Founded by the Australian Academy of Science and the Australian Academy of Technological Sciences and Engineering, we provide institutions with accreditation under the world-respected Athena Swan program.

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Contact

Dr Janin Bredehoeft

Chief Executive Officer, Science in Australia Gender Equity (SAGE)

sage@sciencegenderequity.org.au

Abbreviations

ARTO	Achievement relative to opportunity
EDI	Equity, diversity and inclusion

Focus Area: Supporting a Strong and Diverse Research Sector

This submission addresses the 'Supporting a strong and diverse research sector' focus area of the NCGP discussion paper, specifically responding to:

Q6: How can the NCGP promote a strong and diverse research sector, including through supporting research training and opportunities for early career researchers, women researchers, and other underrepresented groups?

We make three key recommendations:

1. **Use funding as a mechanism to improve equity in research.** Utilise the power of grant funding to shape more equitable opportunities and outcomes for marginalised and underrepresented groups.
 - A. Link all research and grant funding to a commitment to gender EDI
 - B. Set diversity targets and/or quotas
2. **Improve data and reporting transparency on EDI.** Position Australia as world a best-practice leader in EDI by improving collection of data and reporting transparency beyond gender. This includes ethical tracking and reporting of metrics.
3. **Remove barriers to support a strong and diverse research sector.** Remove barriers to support the researcher pipeline and improve access for underrepresented groups through four recommended actions:
 - A. Revise merit-related assessment criteria to reduce potential bias and barriers against researchers from underrepresented groups.
 - B. Peer review practices.

Key Recommendation 1: Use funding as a mechanism to improve equity in research

We recommend that the ARC utilise the power of funding at its disposal to build greater equity in the Australian research landscape. Our first recommendation below uses funding requirements as a lever to shape and change institutions' commitment to equity, while the second directly improves EDI among funding recipients.

Action A: Australian Research Council should link all research and grant funding to a commitment to gender EDI.

We recommend that the ARC require a commitment to gender EDI as part of the assessment criteria for research funding. This also opens the opportunity to take an intersectional approach, addressing not just gender but other intersections of marginalization such as cultural and linguistic diversity, disability, sexuality, and First Nations identity.

Several initiatives in Australia and internationally have begun linking research funding to gender equity and inclusion policies, though the full impacts are yet to be seen. These include the European Union's

Horizon Europe program¹, research funders in Ireland², and domestically at the Snow Medical Research Foundation³ and the National Health and Medical Research Council (NHMRC)⁴. These initiatives are relatively new and thus the impact and outcomes are not yet clear. Independent research recommends⁵ that Australia trial a similar approach, linking funding to an institutional and project-level commitment to EDI policies, practices, and outcomes.

At the **institution level**, criteria could include:

- The institution's EDI strategy, policies and performance⁶. For example:
 - Retention and progression data demonstrating effective diversity initiatives (mirroring requirements in the Australian Public Service⁷. Research institutions readily collect and report these measures to meet reporting requirements for the Workplace Gender Equality Agency (WGEA).
 - In **Ireland**, top research funding agencies have made Athena Swan gender equality accreditation a condition of funding.⁸ To be eligible for funding, higher education institutions must have applied for an Athena Swan Institutional Bronze Award, and they must retain that Award until they obtain an Athena Swan Institutional Silver Award.
 - The **Snow Medical Research Foundation** will only provide new funding to research organisations that meet gender balance benchmarks in leadership, recruitment, promotions and honorary awards.⁹
 - To be eligible for **The European Union's** Horizon Europe funding,¹⁰ applicants must show that¹¹ their institution has a Gender Equality Plan that is publicly available, adequately resourced, evidence-based and supported by capacity building; among other project-related equity criteria (see below).

At the **project level**, criteria could include:

- Demonstrating integration of an EDI lens in the research design, implementation, and expected benefits/impacts. For example:
 - **The European Union's** Horizon Europe funding eligibility also requires applicants to show that they have integrated a gender dimension in their research proposal, for example by examining any sex or gender differences in the outcomes of a drug trial.

¹ Horizon Europe is the EU's 2021–2027 framework programme for research and innovation. To be eligible for Horizon Europe funding, applicants must show that their institution has a Gender Equality Plan that is publicly available, adequately resourced, evidence-based and supported by capacity building; and they have integrated a gender dimension in their research proposal, for example by examining any sex or gender differences in the outcomes of a drug trial.

² Science Foundation Ireland (n.d.) [Irish funding bodies to require Athena SWAN gender equality accreditation for higher education institutions to be eligible for research funding](#), SFI website, accessed 31 March 2023.

³ Hare J (6 March 2023) ['No gender equality? Then no money from this major philanthropist'](#), Australian Financial Review, accessed 31 March 2023.

⁴ National Health and Medical Research Council (12 October 2022) [Working towards gender equity in Investigator Grants](#), NHMRC website, accessed 11 April 2023.

⁵ Kingsley, I., Slavich, E., Harvey-Smith, L., Johnston, E. L., & Williams, L. A. (2024, February 14). Research brief: Gender differences in Australian research grant awards, applications, amounts, and workforce participation. <https://doi.org/10.31219/osf.io/e4jna>

⁶ For example, the institution has a EDI action plan and/or can demonstrate progress, outcomes and impact against that action plan.

⁷ [Movement of Employees | Australian Public Service Commission \(apsc.gov.au\)](#)

⁸ Science Foundation Ireland (n.d.) [Irish funding bodies to require Athena SWAN gender equality accreditation for higher education institutions to be eligible for research funding](#), SFI website, accessed 31 March 2023.

⁹ Hare J (6 March 2023) ['No gender equality? Then no money from this major philanthropist'](#), Australian Financial Review, accessed 31 March 2023.

¹⁰ Horizon Europe is the EU's 2021–2027 framework programme for research and innovation. It was preceded by Horizon 2020, which was delivered from 2014–2020. Both programmes evaluate proposals based on the gender balance of the research teams and the way gender is integrated into the research, but Gender Equality Plans were only required from 2021 onwards. An interim evaluation report for Horizon 2020 will be published in December 2023.

¹¹ European Commission, (n.d.) [Gender quality in research and innovation](#), European Commission website, accessed 31 March 2023.

Horizon Europe also offers dedicated funding for gender and intersectional research and the development of inclusive gender equality policies.

- Similarly, the **Irish Research Council** requires applicants to comment on how they've integrated a sex/gender dimension in their research, encouraging applicants to consider and commit to diversity in user/focus groups where they wouldn't have otherwise done so.
- Prioritizing projects with gender-balanced and diverse research teams. For example:
 - Once again, **The European Union's** Horizon Europe funding program, which favours gender balance among research teams for proposals with the same score¹².

Importantly, any new data collection should avoid undue reporting burdens that could divert resources from actual EDI efforts and implementation.

Action B: The Australian Research Council should establish clear diversity targets and/or quotas for grant funding recipients.

We recommend the ARC implement comprehensive measures, including diversity targets and quotas, affirmative action in funding allocation, an intersectional approach to equity and inclusion, and specific targets for underrepresented groups, to foster a more diverse and inclusive research sector.

- **Affirmative action in funding allocation.** The ARC could complement diversity targets with affirmative action in funding allocation. For instance, the **National Health and Medical Research Council** (NHMRC) successfully implemented targets to award equal numbers of Investigator Grants to women and men¹³, which achieved gender equity within the program in as little as one year¹⁴. Additionally, structural priority funding is allocated for Aboriginal and Torres Strait Islander health researchers in selected NHMRC grant schemes.
- **Intersectional approach.** It's crucial for the ARC to adopt an intersectional approach to EDI. This means addressing various intersections of marginalisation, including cultural and linguistic diversity, disability, sexuality, and First Nations identity. Therefore, while focusing on gender equity, the ARC should also prioritise initiatives that support other underrepresented groups.
- **Specify targets for underrepresented groups.** We recommend that the ARC be specific and intentional about which underrepresented groups are targeted in their EDI initiatives. For example, the ARC could aim to increase the proportion of grant awardees with disabilities and culturally and linguistically diverse backgrounds by specific percentages relative to their research workforce representation (if known). By specifying targets for underrepresented groups, the ARC can ensure that its initiatives are effective in promoting diversity and inclusion across various dimensions.

Key Recommendation 2: Improve data and reporting transparency on EDI

Position Australia as world a best-practice leader in EDI by improving data and reporting transparency beyond gender. This includes collecting, tracking and reporting metrics about who the research is about and how it is conducted, who the research benefits and who conducts the research. Ongoing monitoring

¹² European Commission. Gender equality in research and innovation. European Commission https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/democracy-and-rights/gender-equality-research-and-innovation_en (2024).

¹³ National Health and Medical Research Council (12 October 2022) [Working towards gender equity in Investigator Grants](#), NHMRC website, accessed 11 April 2023.

¹⁴ The Hon Mark Butler MP Minister for Health and Aged Care. Gender equity achieved for major \$379 million health research grant program. *Australian Government, Department of Health and Aged Care* (2023).

and evaluation beyond gender will set the baseline and inform future action towards equity, diversity and inclusion.

- **Metrics on who the research is about and how it is conducted** focusing on populations that have been historically overlooked in research studies and ensuring that research methods are respectful, accessible and inclusive for all potential participants.
 - We recommend the ARC track and publicly report metrics on the populations studied or engaged in ARC-funded research projects, including the demographic breakdown and representation of historically underrepresented groups.
 - The ARC should also monitor and report on the inclusivity of research methods and practices employed in funded projects, such as measures taken to ensure accessible, culturally-responsive, and ethical approaches across all participant groups.
- **Metrics on who the research benefits** to address the needs of Australia's diverse community, particularly marginalised groups.
 - We recommend the ARC systematically track and report on the intended and actual beneficiary populations of funded research projects, specifically highlighting impacts and benefits for marginalised or underserved communities in Australia.
- **Metrics on who conducts the research** to understand and work effectively with the whole community to achieve points A and B above. The Australian research community conducting the research needs to represent diverse lived experiences, cultural competencies, networks and ways of thinking. The ARC needs to ensure it invests in and funds research conducted by a diverse research community to best serve Australian society.
 - We recommend that the ARC annually track and publicly report NCGP application and success rates of principal investigators and research teams (co-investigators) receiving ARC funding by gender, as well as career stage, cultural background, disability status, and other key diversity dimensions, exploring potential interactions between these variables.
 - This data should be analysed to monitor the diversity of the research workforce being supported through ARC grants and identify any potential underrepresentation or disparities among different demographic groups.
 - The ARC should set goals and targets to ensure equitable funding rates across all demographic segments of the research community over time (see Recommendation 2, Action B).

To monitor progress in EDI, the sector should streamline and standardise the collection of diversity data, as current variations in demographic category definitions limit granular-level EDI data analysis. The public reporting of such metrics will establish transparency around how ARC funding is promoting equitable and inclusive research that tangibly benefits all sections of Australian society.

Key Recommendation 3: Remove barriers to support a strong and diverse research sector

We recommend that the ARC implement a multi-pronged approach to remove barriers to a diverse research sector, supporting the researcher pipeline, and improving access for underrepresented groups. The four recommended actions below target key areas that foster greater diversity and inclusion, and level the playing field for researchers facing barriers to participation in research.

Action A: Australian Research Council should revise merit-related assessment criteria to reduce potential bias and barriers against researchers from underrepresented groups

We recommend the ARC revise its grant assessment criteria through two key actions:

- **Focus assessments on the research rather than the researcher.** Evidence suggests current processes may result in judgments unrelated to scientific merit, perpetuating bias against underrepresented groups¹⁵. A natural experiment by the Canadian Institutes of Health Research found women were less likely to receive grants when reviews focused on the principal investigator rather than the research ideas¹⁶. Shifting the evaluation emphasis to the proposed work itself can help level the playing field.
- **Adopt explicit EDI criteria.** Grant assessments may undervalue work disproportionately shouldered by underrepresented groups. Research shows that women tend spend more time on teaching and pastoral care¹⁷. Universities also overly rely on 'equity staff' from marginalised backgrounds¹⁸ to provide pastoral care for students, educate on EDI issues, and drive institutional EDI agenda.¹⁹ Increasing the number of equity staff is one way to relieve the 'minority tax' on existing equity staff. Ensuring adequate weightings for pastoral care, EDI work, and teaching in grant criteria is crucial. For example, adding a "citizenship" or "service" component like Macquarie University's promotion model could incentivize impactful outreach, community engagement, and EDI contributions. Their pioneering framework saw an 87% surge in women applicants and over 90% of reviewers agreed it properly credited diverse academic efforts.

Action B: Australian Research Council should implement measures to peer review processes to reduce potential biases against underrepresented groups

We recommend the ARC should implement measures to peer review processes to reduce potential biases against underrepresented groups through two key actions:

- **Targets/quotas for peer reviewers.** The ARC should establish targets for peer reviewer diversity. These targets should reflect the representation of racialised individuals, First Nations people, persons with disabilities, and women and gender equity-seeking groups in the Australian population. By setting clear targets, the ARC can work towards a more inclusive and representative peer review process.

Canada takes a similar approach in their Research Chairs Program, where the proportion of Chairs who are racialised individuals, Indigenous Peoples, persons with disabilities, and women and

¹⁵ Witteman, H. O., Hendricks, M., Straus, S. & Tannenbaum, C. Are gender gaps due to evaluations of the applicant or the science? A natural experiment at a national funding agency. *The Lancet* **393**, 531–540 (2019);

Johnson, S. K. & Kirk, J. F. Dual-anonymization yields promising results for reducing gender bias: A naturalistic field experiment of applications for hubble space telescope time. *Publications of the Astronomical Society of the Pacific* **132**, (2020).

¹⁶ Witteman, H. O., Hendricks, M., Straus, S. & Tannenbaum, C. Are gender gaps due to evaluations of the applicant or the science? A natural experiment at a national funding agency. *The Lancet* **393**, 531–540 (2019).

¹⁷ Huppatz K, Townley C, Denson N and Bansel P (2019) [Redressing the promotion gap: practices and processes to minimise gender disparities in academic advancement](#), Western Sydney University.

Ashencaen Crabtree S and Shiel C (2019) ["Playing mother: channeled careers and the construction of gender in academia"](#), *SAGE Open*, July–September:1–14.

Sümer S and Eslen-Ziya H (2023) ["Academic women's voices on gendered division of work and care: 'working till I drop ... then dropping'"](#), *European Journal of Women's Studies*, 30(1):49–65.

¹⁸ For brevity, we use the term 'equity staff' in our submission to refer to higher education employees who come from marginalised backgrounds. People from these backgrounds are generally underrepresented in today's higher education workforce. This may include (but is not limited to) female staff, staff who identify as culturally and/or racially marginalised, First Nations staff, staff with disability and LGBTQIA+ staff.

¹⁹ Crimmins G, Casey S and Tsouroufli M (2022) ["Intersectional barriers to women's advancement in higher education institutions rewarded for their gender equity plans"](#), *Gender and Education*.

Mahoney MR, Wilson E, Odom KL, Flowers L and Adler SR (2008) ["Minority faculty voices on diversity in academic medicine: perspectives from one school"](#), *Academic Medicine*, 83(8):781–786.

gender equity-seeking groups must match their representation in the Canadian population by 2029.²⁰

- **Introduce anonymous peer review.** We recommend that the ARC integrate applicant anonymisation into the grant peer review process. This approach has proven successful in leveling the playing field for early-career researchers, women, and other underrepresented groups. Anonymisation ensures that reviewers focus solely on the quality and merit of the research proposal, rather than being influenced by the identity of the applicant. Studies have demonstrated the benefits of anonymisation across various research sectors. A recent Australian study shows that anonymising applications enhances success rates for early career researchers, regardless of gender²¹, consistent with other research findings²². The long-term consequences of limited early-career opportunities disproportionately affect women and underrepresented groups²³. Through anonymisation, improved outcomes for ERCs may create a positive ripple effect throughout the career pipeline, potentially contributing to a more diverse pool of candidates.

Benefits of anonymisation are not only limited to early-career researchers. Specifically, in the astronomy and planetary science sector, anonymising applications for telescope access reduced existing gender gaps by increasing the scores²⁴ and success rates²⁵ for women-led applications. Similarly, at the Irish Research Council, anonymisation led to a significant increase in women recipients of STEM postdoctoral awards²⁶.

However, anonymisation should be implemented with caution, and trialled for effectiveness, to avoid unintended consequence of setting back existing affirmative action efforts to promote more diversity, as documented by the Australian Public Service²⁷.

²⁰ Government of Canada (2023) [Establishing equity targets for 2021 to 2029](#), Canada Research Chairs website, accessed 29 August 2023.

²¹ Kingsley, I., Ho, N., Chan, A. B., Harvey-Smith, L., & Williams, L. A. (2023, December 14). Evaluating the cross-disciplinary utility of anonymizing applications for scientific equipment in the Australian research sector. <https://doi.org/10.31219/osf.io/jyq2f>

²² Carpenter, J. M. et al. Update on the Systematics in the ALMA Proposal Review Process after Cycle 8. *Publications of the Astronomical Society of the Pacific* 134, (2022).

²³ Danell, R. & Hjerm, M. The importance of early academic career opportunities and gender differences in promotion rates. *Research Evaluation* 22, 2010–2014 (2013).

²⁴ Johnson, S. K. & Kirk, J. F. Dual-anonymization yields promising results for reducing gender bias: A naturalistic field experiment of applications for hubble space telescope time. *Publications of the Astronomical Society of the Pacific* 132, (2020).

²⁵ Strolger, L. & Natarajan, P. Doling out Hubble time with dual-anonymous evaluation. *Physics Today* <https://physicstoday.scitation.org/doi/10.1063/PT.6.3.20190301a/full> (2019) doi:10.1063/pt.6.3.20190301a

²⁶ Irish Research Council. (2016). 'Irish Research Council policies and practice to promote gender equality and the integration of gender analysis in research'. http://research.ie/assets/uploads/2016/06/final_-_progress_report_on_gender.pdf. Irish Research Council.

²⁷ Hiscox, M. J. et al. *Going Blind to See More Clearly: Unconscious Bias in Australian Public Service Shortlisting Processes*. <https://behaviouraleconomics.pmc.gov.au/projects/going-blind-see-more-clearly-unconscious-bias-australian-public-service-aps-shortlisting> (2017).