aamri

Association of Australian
Medical Research Institutes

# SUBMISSION TO

# WOMEN IN STEM DECADAL PLAN

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# 1 About AAMRI

The Association of Australian Medical Research Institutes (AAMRI) is the peak body for medical research institutes across Australia. Our 49 member organisations work on a broad spectrum of human health issues such as preventive health, chronic disease, mental health, immunology and Indigenous health. Their research ranges from fundamental biomedical discovery through to clinical research and the translation of research findings from bench to bedside.

AAMRI's members and their 19,000 staff and research students undertake over one-third of all government funded medical research. Their combined revenue exceeds $1.65 billion per annum, and they received over $622 million in competitive grant funding in 2016. With over 900 active clinical trials and over 100 new patents awarded per year, our members have a firm focus on improving health outcomes and delivering great commercial returns for the nation.

**AAMRI is pleased to make this submission to the consultation on development of the *Women in STEM Decadal Plan*.**

# 2 Summary

## 2.1 Retaining and promoting women in medical research careers

Many of the barriers to attracting, retaining and promoting women in STEMM (Science, Technology, Engineering, Mathematics and Medicine) education and careers are rooted in broader societal and cultural issues. These issues include:

- Perceptions, biases and stereotypes about women's abilities in STEMM fields
- gendered expectations around parenting and caring responsibilities
- the way that performance and success is evaluated and rewarded in promotion and funding processes.

In medical research, the major issue affecting women is poor representation in senior and leadership roles due to loss or stalling at the mid-career stage. The following recommendations seek to address the underlying structural and cultural barriers preventing retention and promotion of women in medical research. The overarching goal is to achieve gender equality in senior medical research positions and leadership roles.

## 2.2 Recommendations

1. Increase visibility of *Relative to Opportunity* statements in grant application forms for NHMRC, ARC and other funding schemes.
2. Expand performance measures for track record in research funding, recruitment and promotion processes to promote gender equality and diversity.
3. Ensure there are research funding initiatives that prioritise the most novel, promising and feasible scientific ideas.
4. Establish sector-wide tracking of the gender pay gap for research organisations and industry.
5. Coordinate and streamline reporting of sector wide metrics for gender equality in the workforce to track progress and successes.
6. Include behavioural expectations as well as performance when evaluating track record and researchers' abilities for research funding and promotions.
7. Increase promotion and use of existing directories of successful STEMM role models and leaders, ensuring cultural and gender across the full spectrum of careers.
8. Provide a balance of women-only initiatives and initiatives aimed at overall improvement in the industry.
9. Parental support initiatives should be introduced and available for all parents and not limited to women.
10. Ensure organisations have high quality training in place for men and women to support and facilitate the complementary culture changes related to diversity and gender
11. Initiatives addressing gender equality need to be intersectional and include women from diverse cultural backgrounds and LBGTIQA+ people.

# 3 STEM includes Medicine: STEMM

The *Women in STEM Decadal Plan* discussion paper does not explicitly include medicine in its description of STEM fields. We propose that instead STEMM be used - Science, Technology, Engineering, Mathematics and Medicine – the definition used by the Science and Gender Equity (SAGE) program[1].

Including medicine in the definition of STEMM will acknowledge the essential scientific contribution and specific issues faced by women and girls in medical and clinical professions. It will also include the 32,000 dedicated medical researchers in Australia who form the foundation of the life science, biotechnology, medical technology and pharmaceutical industry.

# 4 Gender inequality is not limited to STEMM

Recently, gender inequality issues have been highlighted in response to the continued underrepresentation of women in business and in parliament, demonstrating that cultural issues underlying advancement of women to senior and leadership positions is not just a STEMM problem. Consequently, introducing initiatives in an isolated sector could be met with resistance, particularly if the initiative is aimed at addressing wider established cultural barriers. **The greatest impact can only be made through a coordinated and strategic approach by introducing initiatives in STEMM education and careers that are evidence-based, scalable and transferable to other organisations' processes and sectors.**

# 5 The need to retain and promote women in medical research careers

In medical research, the major issue affecting women is underrepresentation in senior roles because they leave or are not promoted at the mid-career stage. While 60% of the workforce and 55% of PhD and Masters students at medical research institutes are women, over 70% of highest seniority medical researchers are men (Figure 1). Unlike other STEMM fields - physics, engineering and mathematics[2] - medical research has strong female representation up to postgraduate and junior postdoctoral level, but women are lost or stalled in their career paths at mid-career.

**The loss or stalling of women's research careers at the mid-career stage is caused by structural and cultural barriers in the research system that affect how women's performance and success is evaluated and rewarded.**

**Initiatives to retain and promote women in STEMM at all stages of the pipeline must directly address both the cultural and structural barriers with equal and coordinated efforts.**

[1] SAGE, Gender Equity in STEMM, 2016. http://www.sciencegenderequity.org.au/

[2] Australia's STEMM Workforce Full Report, March 2016, www.chiefscientist.gov.au

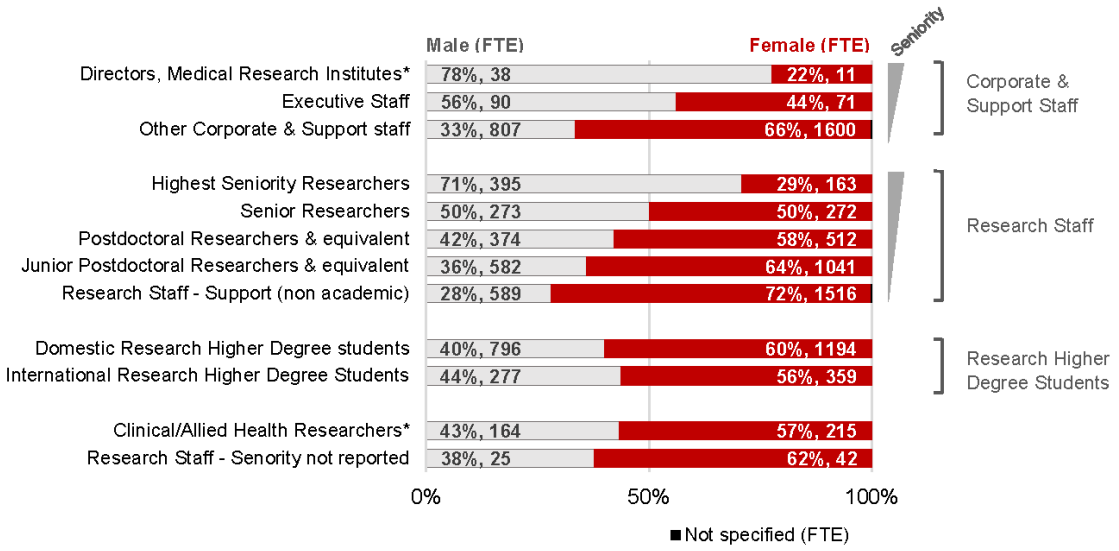


*Figure 1. Staff and students at Australian medical research institutes, by seniority and gender (FTE)[3].*

# 6 Structural barriers that prevent retention and promotion of women in medical research

Several key structural barriers prevent women from successfully obtaining research funding at critical stages in their research career. This leads to many women either exiting medical research completely or unable to be promoted. These barriers need to be addressed directly through active, coordinated initiatives that:

- introduce requirements for equitable practices in research funding, recruitment and promotion processes.
- align and integrate reporting on gender equity for organisations including tracking the gender pay gap across the broader medical research sector.
- provide initiatives that support parents and individuals with caring responsibilities.

## 6.1 Current processes for evaluating merit are inequitable

Current processes for evaluating and assessing an individual researcher's merit for government research funding and for promotion preserve the status quo and often disadvantage women. This is particularly apparent at mid-career (e.g. establishing an independent research group). These processes most often favour researchers, often men, who are already established and have strong track records, a key factor in making funding decisions. In NHMRC grant schemes in 2015, both application and success rates for were higher for male investigators than for female investigators[4].

Opportunities to maintain research output is often reduced for people who work flexibly or part-time. While "relative to opportunity" statements are included to account for this, they

[3] AAMRI (2018). *Australia's Medical Research Institute Snapshot: 2018 AAMRI Members Report*. https://aamri.org.au/wp-content/uploads/2018/09/2018_AAMRI_Members_Snapshot_Report-final.pdf
[4] Australian Academy of Science, *Women in STEM Decadal Plan* Discussion paper, 2018.

are often buried in application forms and reviewers could downplay their significance during assessment. Biases regarding women's perceived abilities or interests can also affect merit evaluation regardless of whether they have caring responsibilities or not.

Recruitment and promotion processes in research use similar indicators of performance as research funding processes and are subject to similar biases.

**Recommendations**

1. **Increase visibility of "relative to opportunity" statements in NHMRC, ARC and other grant application forms.**
2. **Expand performance measures for track record in research funding, recruitment and promotion processes to promote gender equality and diversity.** More inclusive measures could include recognition for training of students and junior staff (distinct from supervision) or contribution to health impact.
3. **Ensure there are research funding initiatives that prioritise the most novel, promising and feasible ideas.** Focussing on the scientific proposal and de-emphasising track record can both break away from systemic biases and encourage fresh ideas and better science. For example, the National Foundation for Medical Research Innovation and the NHMRC's new Ideas Grant Program are using this approach.

## 6.2 The gender pay gap persists in Australia

The gender pay gap is not limited to STEMM careers and is an issue that must be addressed at a national level and across all industries. In Australia the gender pay gap across all sectors has reduced very slightly from 14% in 2010 down to 13% in 2015, similar to the OECD average of 15%[5]. There is an opportunity to learn from other nations that have put in place policies leading to a dramatic reduction in the gender pay. For example, Belgium has the lowest gender pay gap in the OECD, at 3% in 2015, which has been reduced from 7% in 2010.

**Recommendation**

4. **Establish sector-wide tracking of the gender pay gap for research organisations and industry**

## 6.3 Gender equity reporting for organisations is not streamlined

Organisations currently report on different workforce gender metrics to different organisations and agencies which could be better aligned and integrated (e.g. Workplace Gender Equity Agency, Employer of Choice etc). Streamlining reporting metrics and

[5] OECD (2017), *The Pursuit of Gender Equality:An Uphill Battle*, OECD Publishing, Paris, https://doi.org/10.1787/9789264281318-en.

processes on gender equity in the workforce would strengthen the sector's ability to track progress and success.

**Recommendation**

5. **Coordinate and streamline reporting of sector wide metrics for gender equality in the workforce to track progress and successes.**

## 6.4 Harassment and bullying can cause women to leave research careers

Current evaluation processes for research funding and promotion do not directly assess collegial behaviour alongside other indicators of performance such as publications. As noted in the discussion paper, in cases of poor conduct such as harassment and bullying victims can be left feeling unsupported and are more likely to leave their STEMM career[6]. Addressing this requires that behaviour and conduct be considered when making research funding awards or determining promotions.

**Recommendation**

6. **Include behavioural expectations as well as performance when evaluating track record and researchers' abilities for research funding and promotions.** For example, reports of harassment and bullying behaviour could included for consideration in processes for awarding promotions and research funding.

# 7 Cultural barriers that prevent retention and promotion of women in medical research

Cultural barriers for women that are not limited to STEMM or research careers include the burden of caring duties, often falling to women, as well as a lack of mentors and advocates in the workplace. These barriers can lead to many women leaving a STEMM or research career entirely, or becoming stuck at a mid-career level.

**Issues related to parental and carer responsibilities are not the only reason that women leave or are not promoted beyond mid-career stage in research.** Research culture is heavily based on individuals, their networks and their influence in a competitive environment with predominantly men in senior positions. This environment maintains unconscious and conscious biases about women's capabilities, contributions and value of their work leading to disadvantages in promotion and recruitment. This can also lead to fewer speaking opportunities at conferences, leadership roles and collaborations compared to their male colleagues, further disadvantaging women regardless of whether they work full or part time or have parental responsibilities.

[6] Australian Academy of Science, *Women in STEM Decadal Plan* Discussion paper, 2018.

These barriers need to be addressed through:

- Providing leadership in culture and societal issues across all sectors.
- Promoting existing databases of successful and skilled, diverse individuals in STEMM for outreach, speaking and media opportunities.
- Encouraging organisational training programs in gender equality and diversity issues for men and women at all ages and levels of seniority.
- Ensuring support for parents and carers are available to ALL, not just mothers.
- Ensuring a balance of women-only initiatives and support for women in openly competitive processes.
- Ensuring that all initiatives to increase gender equality are intersectional and inclusive.

## 7.1 Lack of a wide range of STEMM role models and mentors for women and girls

Poor representation of women in senior positions also results in a shortage of visible female and diverse role models, and reinforces gendered stereotypes in STEMM fields. Women are still vastly underrepresented as keynote speakers and presenters at major conferences and events, in leadership positions, and in the media.

Several excellent directories female leaders showcasing successful women with a range of backgrounds, disciplines, and professional expertise have been established that can greatly increase the accessibility, visibility and representation of women. Examples of online directories include the Victorian Women's Trust website, *Here She Is*[7], and a national directory called *Who's who of women in Australia*[8].

### Recommendation

7. **Increase promotion and use of existing directories of successful STEMM role models and leaders, ensuring cultural and gender across the full spectrum of women's careers.**

## 7.2 Support provided exclusively through women-only initiatives can reinforce biases

To avoid reinforcing biases and segregating women's successes, providing opportunities to boost participation of women should include both improving open competitive processes and introducing women-only initiatives.

[7] https://www.vwt.org.au/projects/here-she-is/
[8] https://connectweb.com.au/pages/whos-who-of-australian-women.aspx

Opening up opportunities for parental support – in whatever form – to men as well as women would be a significant step towards addressing the underlying culture issue of gendered expectations around parenting.

**Recommendation**

8. **Provide a balance of women-only initiatives and initiatives aimed at overall improvement in the industry.** For example, additional funding provided by the NHMRC in the 2017 funding round was exclusively for grants with female lead investigators. While the funding was a women-only initiative, the grant applications were reviewed and scored highly in the NHMRC's established competitive process but missed out on funding.

9. **Parental support initiatives should be introduced and available for all parents and not limited to women.** For example, one organisation provides a financial support as a lump sum for parents that can be spent at the recipient's discretion to support their research careers. Other organisations offer a Carer's Travel Award, which is flexible financial support for parents and carers during work-related travel to fund extra childcare or additional in-home support while the researcher is travelling.

## 7.3 Initiatives providing new opportunities for women and parents could cause resistance or backlash without adequate support

There is a risk of a negative culture developing among researchers who see a suite of new advantages arising for women and parents through gender equality initiatives. This risk could be mitigated through support mechanisms and training for all men and women in STEMM workplaces, that complement other gender equality initiatives. Training could address potential biases related to parental duties, part time and flexible work.

**Recommendation**

10. **Organisations should have high quality training in place for men and women to support and facilitate the complementary culture changes related to diversity and gender.** For example, this could include recognising implicit/unconscious bias and stereotypes, how to address issues of harassment and bullying in the workplace, and ensuring that gender equity is intersectional.

## 7.4 Cultural change in gender equity requires participation across all sectors

Leadership in gender equity in all workplaces – government, research, industry and not-for-profit sectors - will encourage more women to enter and stay in STEMM fields. This leadership will need to encourage initiatives such as the best options for parental leave and flexible work and career development options. Organisations that perform the best in gender equity at an international level should be identified and their gender equity policies and processes examined to see whether they would work in the Australian context.

**Recommendation**

11. **Initiatives in STEMM sectors that encourage more women to enter and stay in STEMM fields should be scalable and transferable across sectors to have the greatest cultural impact**.

## 7.5 Barriers affecting women from different backgrounds are poorly understood

Intersectionality should be built into the *Women in STEM Decadal Plan*. Any initiatives designed to address gender diversity in STEMM must be intersectional, and ensure they are inclusive of increasing diversity more broadly. Barriers facing Aboriginal and Torres Strait Islander women, women of colour, women from culturally and linguistically diverse (CALD) communities as well as LGBTIQA+ people in STEMM should be investigated, rather than assuming all women from different backgrounds face the same issues. While this is an essential consideration for all initiatives, it is of particular importance in initiatives that increase visibility of STEMM role models to ensure that all women are represented.

**Recommendation**

12. **Initiatives addressing gender equality need to be intersectional** - inclusive of Aboriginal and Torres Strait Islander women, women of colour, women from culturally and linguistically diverse (CALD) communities and LGBTIQA+ people.