

Stopping an exodus: helping Victoria's early and mid-career medical researchers to rebound from COVID-19 disruptions

Summary

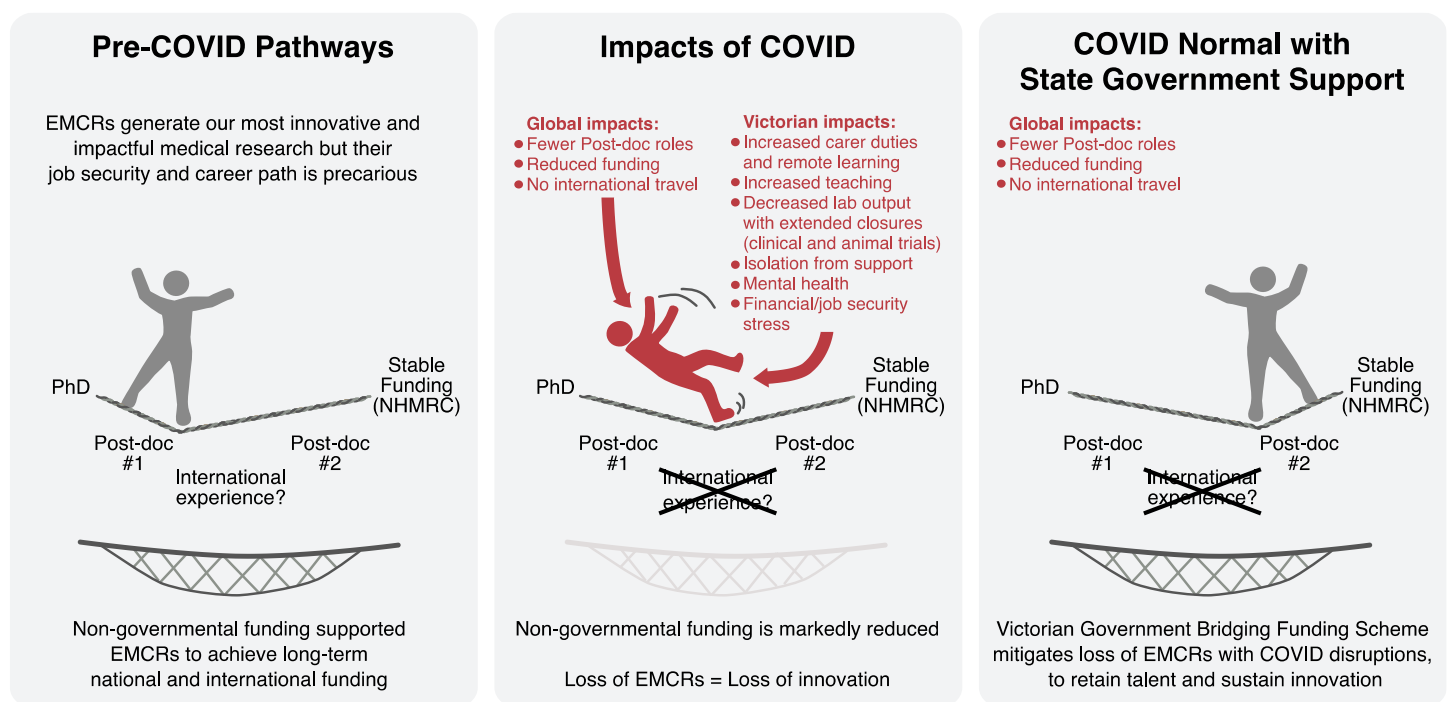
Victoria is Australia's leading hub for medical research and breakthrough discoveries. Victorian medical researchers contribute significantly to the economic vitality of this state.

The Australian medical research sector, and the diversity of its workforce, is at imminent risk. Research disruptions caused by the COVID-19 pandemic will result in an acute loss of highly skilled early and mid-career researchers from the workforce.

Research disruptions are amplified for Victorian medical researchers due to the state's extended period of lockdown, potentially decreasing the competitiveness of the Victorian medical research workforce for future national and international funding.

Stemming this potential exodus of talent with targeted short term funding for early-mid career researchers (EMCR) would protect Victoria's medical research workforce, sustain and build innovation in health, and position this vital sector to continue to grow as a crucial part of our economic recovery.

We recommend that the Victorian Government invest in bridging funding for medical researchers via a \$20 million grant scheme. This one-off investment will provide up to \$100,000 over 12 months for at least 200 early-mid career researchers Victoria-wide.



WiSPP strongly supports VicAAMRI's Budget submission for increased Operational Infrastructure Support (OIS) funding. Increased OIS funding is essential to ensure that Victorian medical research institutes can support their workforces into the future. This proposal complements the OIS proposal with a one-off funding scheme to provide immediate support for researchers at risk of leaving the research workforce due to COVID-19 impacts.



This proposal was developed by Women in Science Parkville Precinct (WiSPP) in consultation with representatives from the Equity in Medical Research Alliance (EMRA)

The WiSPP Partner Institutes are:



The Problem

- The NHMRC funded medical research workforce has been contracting for several years, with EMCRs the worst hit.^{i ii}
- Victorian independent medical research institutes are projecting a net financial impact to June 2022 of over \$100 million, and over 300 jobs are at risk in these institutes. Revenue losses in the University sector will see additional significant job losses across the broader Victorian medical research workforce.ⁱⁱⁱ
- Many EMCRs are precariously funded, cobbling together small philanthropic grants, discretionary funding from institutions and other forms of non-government funding to provide a salary. This type of funding has been dramatically reduced, or in some cases, lost altogether due to the COVID-19 pandemic.^{iv}
- To convert to a more stable career funded by grants from national and international funding agencies, researchers must accrue critical success indicators including research publications, conference presentations, PhD supervision and successful award of smaller grants.
- Measures introduced in response to the COVID-19 pandemic have resulted in significant barriers for researchers to attain these critical indicators. Barriers are both global and specific to Victoria, for example:
 - Hiring freezes, difficulties with international relocations and increased precariousness of funding have dramatically reduced opportunities for new postdoc placements that underpin career progression from PhD to established researcher.
 - Travel bans have prevented interstate and international travel to build important networks and establish collaborations.
 - Restricted access to laboratories and major research facilities has delayed projects.
 - Clinical trials and population health studies have been halted, delayed or closed due to interrupted access to patients and population cohorts.
 - Restricted access to animal facilities has caused the loss of both short-term and long-term animal experiments.
 - Cessation of casual contracts for marking and the move to online learning has increased demands on researchers with teaching duties.
 - Childcare and school closures have resulted in high demands on carers juggling remote schooling and research, hindering their productivity.
 - Ongoing uncertainty around long-term career impacts and productivity loss is causing anxiety and other mental health impacts.
- EMCRs and recent graduates working to build their track record during COVID-19 pandemic are experiencing disproportionate disadvantages due to disruptions.^v
- EMCRs with caring responsibilities have been disproportionately impacted by the COVID-19 pandemic.

Gendered Impacts:

- Women make up more than half the EMCR cohort (64% and 58% at junior and senior postdoc levels respectively).^{vi}
- There are multiple reasons why the COVID-19 pandemic is disproportionately affecting women in the medical research workforce. The evidence shows that women undertake a greater share of caring responsibilities for children and other family members, as well as pastoral care for students and junior colleagues.^{vii viii}

Risk of Inaction

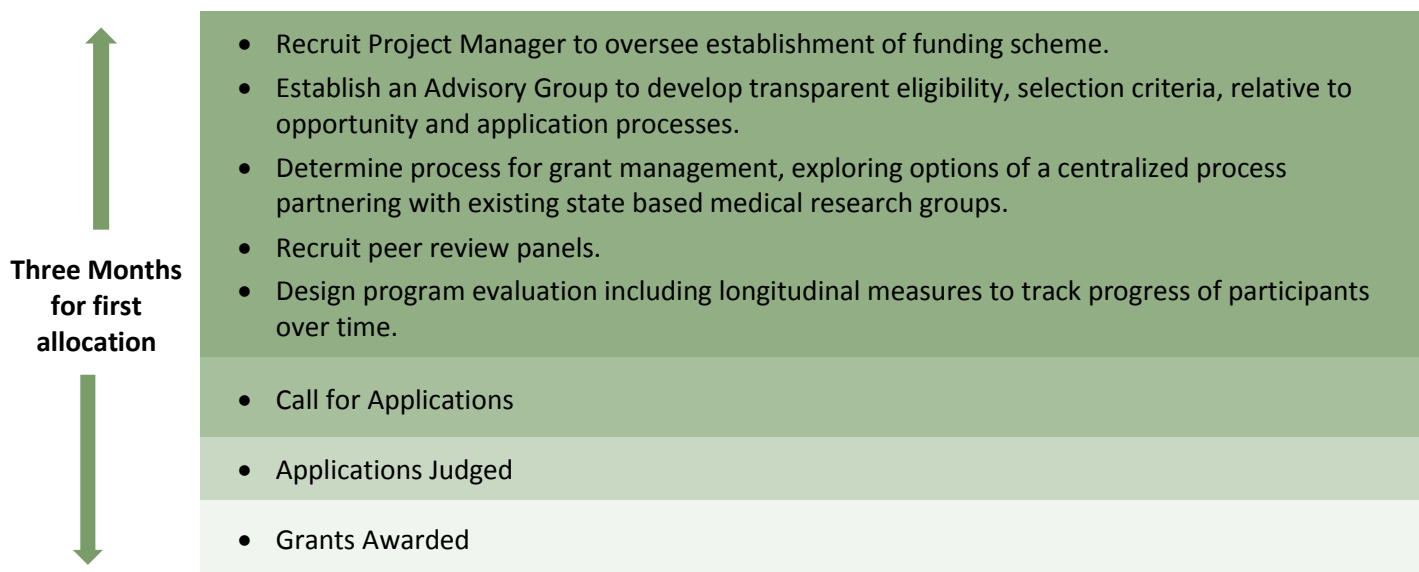
- The Victorian workforce will lose hundreds of highly trained individuals with unique and internationally competitive skill-sets accumulated over at least 10 years of education and training.
- This loss puts at risk Victoria's current reputation for medical research excellence and international standing.
- Victoria risks losing its competitive edge in attracting national and international funding. For instance, Victorian researchers were awarded NH&MRC grants worth over \$329 million in 2019 (44% of NH&MRC funds): losing people puts this revenue source at risk.^{ix}
- Given the disproportionate impact of the COVID-19 pandemic on women, inaction will exacerbate existing gender inequalities in the medical research workforce and wind back recent efforts to achieve gender equity.

Proposal

We recommend that the Victorian Government invest in bridging funding for medical researchers via a \$20 million grant scheme. This one-off investment will provide up to \$100,000 over 12 months for at least 200 early-mid career researchers Victoria-wide.

- Short-term (12 months) salary support for research continuation will effectively buy back lost time for EMCR researchers to complete projects, and to reach critical research indicators required for future stable national and international funding.
- For expeditious and fair allocation of funds, the scheme would be rolled out over two rounds. The first round of successful grants being awarded within three months and the second round four to six months later.
- Salary support to extend PhD and Postdoc duration is a pre-existing model used to enable EMCR researchers to maximise output and bridge gaps between employment opportunities.^x This would be even more beneficial during the COVID-19 pandemic, where output has been significantly disrupted.
- Research organisations often allocate “flexible” money for similar internal programs to provide bridging or “near-miss” funding. However due to the pandemic and the economic downturn, these sources of funding are no longer available to provide this vital support.
- The scheme would fill a critical gap between two current proposals: for an increase nationally in 2022 of 300 EMCR fellowships and for increased infrastructure funding to Victorian MRIs.^{xi xii xiii}
- The proposed grant scheme would provide targeted support for:
 - Recent PhD graduates who can demonstrate lost funding or employment opportunities due to COVID -19.
 - EMCRs with caring responsibilities who have missed research milestones due to research disruption.
 - Those who can demonstrate that the funding extension is needed, due to COVID - 19 related research disruptions, and would benefit both research output and career progression.
- **The proposed grant scheme would be open to all eligible Victorian EMCRs. A diversity and inclusion lens acknowledging opportunity differences will be used in the application processes and selection criteria.**

Suggested Timeline



| Costs | \$ |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Project Manager and Administrator * to establish funding scheme, oversee and evaluate program. 1.5FTE -2 FTE Positions over a 12- 18 month period. | 250,000 |
| 200 x \$100, 000 Grants | 20,000,000 |
| Total | 20,250,000 |

* These positions to be based in an existing state-based organisation

STORIES FROM VICTORIAN MEDICAL RESEARCHERS

“I am on the cusp of the biggest career precipice of my life. I am now completely dependent on the outcome of this year’s NH&MRC ideas grants round for my salary and the salary of my research assistant for next year. COVID has delayed many processes so I will now find out if I have a future in medical research in December. I am trying to have a lasting impact in what I consider to be my last year in the career that I desperately love, but my hands have been tied by laboratory shutdowns, and my primary caring role, which has impacted both my time and my capacity for science, due to the need to deliver home schooling and care for my young children. I don’t think that I will be in a position to finish the projects that I have worked so hard on, before having to leave my science behind, due to the lack of funding. I am exhausted, despondent, isolated and sad about my (lack of) future in science.” – **Mid-career Researcher**

“COVID and the accompanying restrictions to the way we work and live has resulted in all my research being put on hold. As a midcareer researcher, I support a team of people at the start of their research career. This year had so much promise for my team. We had just been awarded funding for the first time to test out some big ideas and we were about to welcome a new scientist from overseas to our team. While not being able to get into the lab has been frustrating, the fact that our funding has shrunk in size as salaries and rent are not on hold is devastating. While I know we will return to the lab next year, right now I’m struggling to see our future as we have been stripped from all the resources to actually do the work. I will have to let staff go, and I have no ongoing funding for my own salary beyond a year. We are in the holding pattern right now but I fear our landing on the other side won’t be smooth. This year really has been hard for my team and a silver lining is that we have grown together like a family. As their leader, I feel great responsibility for these talented individuals and know if we can just hold on, their ideas will be part of the solutions to some of the biggest problems in medicine.” – **Mid-career Researcher**

“I am trained as both a psychologist and a researcher and I do what I do to help people. I just finished my PhD and the research side of my work allows me to investigate new ways to understand how to rehabilitate people who have experienced brain injury. I am feeling bombarded by the many hoops I am required to jump through to maintain my research career, and as I near the end of my contract this year, I fear I won’t have any more options to remain. While I am so grateful to have a clinical role to fall back on, I have so much energy and many ideas for how to harness lifestyle activities like playing music, for brain health and rehabilitation. To give up on my research career would be to lose a critical link between scientific evidence and translation into clinical practice.” – **Recent PhD Graduate**

These quotes were drawn from members of the EMRA community

Supplementary information and references

ⁱ Mid-career level grants (Leadership level 1) in the NHMRC’s Investigator Grant scheme have the lowest success rate of all five grant levels at around 7% and 9% in 2019 and 2020, respectively. (Australian Association of Medical Research Institutes: <https://aamri.org.au/wp-content/uploads/2020/08/AAMRI-submission-to-the-Senate-inquiry-into-the-Australian-Governments-response-to-COVID-19.pdf>)

ⁱⁱ There was a 16% loss of personnel (full-time equivalent) supported by NHMRC Project Grant scheme between 2013 – 2016. If reflective of the broader HMR sector, a 16% loss of workforce equates to a \$4.5 Billion reduction in net benefits. (Australian Society for Medical Research: https://treasury.gov.au/sites/default/files/2019-03/C2016-052_Australian-Society-for-Medical-Research.pdf)

ⁱⁱⁱ VicAAMRI State Budget 2020-21 Investment Proposal

^{iv} The medical research sector is reliant on philanthropy, donations, commercial income, endowment returns, and for those in the university sector, income from international education. (Approximately 60% of the sector’s income). The Association of Australian Medical Research Institutes (AAMRI) has projected a fall in non-government revenue to be between \$200 million and \$400 million over the next two years. No additional funding has yet been made available to allow researchers time to overcome disruptions caused by the pandemic. (Australian Association of Medical Research Institutes <https://aamri.org.au/wp-content/uploads/2020/08/AAMRI-submission-to-the-Senate-inquiry-into-the-Australian-Governments-response-to-COVID-19.pdf>)

^v Australian Academy of Science Early- and Mid-Career Researcher (EMCR) Forum:

(<https://www.science.org.au/files/userfiles/support/documents/covid19-emcr-impact-report.pdf>)

^{vi} VicAAMRI (https://aamri.org.au/wp-content/uploads/2020/08/AAMRI_OIS_Report-2020_WEB.pdf)

^{vii} Borger, J., Lawlor K., and Quinn, K. (2020) <https://womensagenda.com.au/latest/urgent-government-funding-is-needed-for-effective-diverse-and-equitable-medical-research/>

^{viii} WiSPPP Position Paper: (<https://www.wispp.org.au/covid19>)

^{ix} From current summary of NHMRC grants in 2020 (updated 22/7/20) (<https://www.nhmrc.gov.au/funding/data-research/outcomes-funding-rounds#download>)

^x [Cancer Council Victoria](#) offers Postdoctoral Fellowships to Victorian scientists who have recently completed a PhD and who would benefit from an additional 6 or 12 months of support.

^{xi} Australian Association of Medical Research Institutes: (<https://aamri.org.au/news-events/aamri-news/2020budgetsubmission/>)

^{xii} VicAAMRI State Budget 2020-21 Investment Proposal

^{xiii} Increasing OIS funding is essential to enable institutes to continue to support EMCRs who are successful in attracting this funding should the scheme go ahead.