AUSTRALIAN COUNCIL OF LEARNED ACADEMIES (ACOLA) 2020-21 PRE-BUDGET SUBMISSION

Budget Priority

Over the past year, Australia has faced significant challenges that have disrupted our social and economic wellbeing. In considering the 2020-21 Federal Budget, the Australian Council of Learned Academies (ACOLA) and our members – the Australian Academy of the Humanities, the Australian Academy of Science, the Academy of the Social Sciences in Australia, the Australian Academy of Technology and Engineering and the Australian Academy of Health and Medical Sciences – urge the Australian Government to adopt a strategic approach to supporting Australia's research sector that maintains Australia's strong performance in research outcomes. In particular, we recommend increased support for Australia's early- and mid-career researchers (EMCRs) who provide the critical pipeline for current and future talent and expertise. We urge the Australian Government to support initiatives that attract, support and retain EMCRs in the research workforce, such as fellowships, networks, industry-led innovation, and research infrastructure.

Proposed response

In order to realise the many social and economic benefits that flow from new knowledge and innovation, and to fully harness previous Government investments in research skills and infrastructure, Australia requires a dynamic, integrated, and multidisciplinary research and innovation ecosystem: this includes a diverse pipeline of high-skilled professionals, world-leading research organisations and infrastructure, and engaged private and government sectors willing to invest in and drive value creation from R&D.

ACOLA proposes several measures to help abate the loss of research talent currently occurring as a result of COVID-19 and to provide a foundation for strong growth and innovation across all domains.

- **Support initiatives that help attract and retain EMCRs.** Investing in fellowships across the disciplines to support research excellence and development and understanding of emerging issues will be crucial for accelerating innovation and providing job security. Supporting networks across the research sector is also important for EMCR retention and career development, particularly in an environment when face-to-face activities are limited.

- **Fostering strong research and innovation with industry in areas of Australian strengths.** As Australia rebuilds the economy, targeted contestable funding opportunities should be considered to drive industry-led innovation, jobs and economic prosperity. Activities should focus on areas in which Australia has current or potential competitive strengths. A number of these have been identified in recent ACOLA Horizon Scanning reports.

- **Reaffirm commitment to maintaining and growing research infrastructure.** Researchers require world-leading tools to maintain research excellence. To support this, the Australian Government should reaffirm its commitment to research infrastructure through its next research infrastructure investment plan, and commence activity on the next regular National Research Infrastructure Roadmap. This will ensure Australia has a long-term plan and funding for the necessary capabilities to support research in the humanities, arts and social sciences (HASS), in science, technology, engineering, mathematics and medicine (STEMM), and in interdisciplinary research endeavours aimed at solving Australia's big challenges.

Context

Fundamental research across the spectrum of research fields – HASS and STEMM – gives the research and innovation system its core capacity. It provides the platform for multidisciplinary approaches to solving problems, and the expertise and capability to train the next generation of university students and emerging researchers and innovators. It also enables Australia to identify emerging opportunities globally as well as at home, and to prepare for and respond to emerging economic, health, environmental, and societal challenges.

EMCRs are key to Australia's research and innovation engine room. Many are active in creating evidence-informed responses to major challenges including the COVID-19 pandemic and the 2019-20 bushfires, and in researching and developing emerging technologies, such as artificial intelligence, that support these responses.
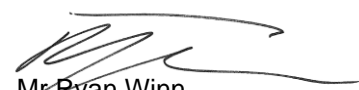
EMCRs in particular are facing disproportionate challenges as a result of the pandemic[1,2,3]. While Government is expanding domestic student places through its higher education reforms, the initiative is at risk without EMCRs to lead expanded teaching and research training.

Australia's teaching and research workforce will be crucial in driving the nation's recovery and capacity to thrive with a healthy, vibrant society, environment and economy. Long-term, sustained investment in fundamental and translational research has positioned Australia to react and respond quickly to crises but COVID-19 has created risks to this capability in the short and medium term.
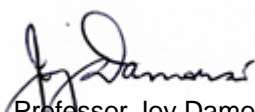
Australia's recovery from COVID-19 must be underpinned by coordinated national and state-level policies and programs that foster and incentivise collaboration and innovation within and across government, universities, research institutes and industry. Australia stands to lose research capability over the next five years through budget shortfalls in universities, research institutes and government science agencies due to impacts of the pandemic on non-government funding sources[4]. When the next crisis strikes, we risk not having the world-class researchers or infrastructure required to be ready to swing into action.

Supporting Australia's research sector is a key issue that requires immediate attention as well as ongoing review over the next 12-18 months. We would welcome the opportunity to discuss and explore this further with you.
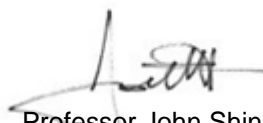
The learned academies are also providing individual pre-Budget submissions that address their specific interests.
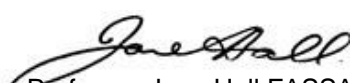
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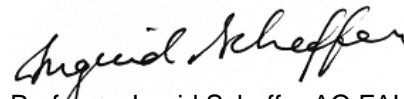
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[1] Australian Academy of Science (2020). Early- and mid-career researchers fear their careers are at risk due to pandemic
[2] Professional Scientists Australia and Science & Technology Australia (2020). The initial employment impact of the COVID-19 Pandemic on Australia's Science Workforce.
[3] Research Australia (2020). COVID-19 The impact on health and medical researchers.
[4] Campus Morning Mail (2020). Research funding crisis: imminent and enormous.