

Benefits of collaboration

- 2.1 The Committee was extremely impressed by the breadth of international research collaboration, and, in particular, the very high profile of Australian researchers in the international research community.
- 2.2 Many of the submissions to the inquiry elaborated on the nature and extent of Australia's contribution to international research collaboration, the benefits to Australia from engaging in those collaborations, and the key drivers of international research collaboration at the government, institutional and researcher levels.
- 2.3 The Committee greatly appreciates the contributions made by submitters concerning these particular inquiry terms of reference. Those contributions set a valuable context for the Committee during its discussions concerning the major impediments to effective international research collaboration.
- 2.4 This report seeks to focus on those impediments and how they will be addressed, and other principles and strategies for supporting international research engagement.
- 2.5 This chapter briefly summarises the benefits of international research collaboration, and provides selected key examples as noted in the submissions. The Committee encourages readers to seek further examples from the full set of submissions to the inquiry.

Benefits

- 2.6 The Australian Nuclear Science and Technology Organisation (ANSTO) stated that international collaborations can bring key skills, capability and

infrastructure to Australia, and facilitate the participation of Australian experts in research activities of global significance.¹

2.7 The University of NSW described some of the tangible direct benefits of international collaborations including:

- Improved international research reputation of Australian higher education institutions, captured in indicators such as international University Rankings ...
- Increased numbers and quality of co-authored research publications, books and publications through access to a larger “virtual” critical mass of researchers
- Access to international expertise and networks of researchers that permit major programs of global (and national) significance to be addressed
- Access to data-bases and collections of data from overseas, samples for testing or analysis, cutting edge technology, equipment and infrastructure
- Increased ability and opportunity to translate research outputs into internationally relevant outcomes through international exposure and engagement
- Increased opportunity for the development of Australian researchers and students, from a cultural and professional perspective
- Enhanced ability of Australian Universities to attract the best international undergraduate and higher degree research students, postdoctoral and research Fellows, academic staff and visiting staff and students
- Enhanced opportunities for Australian students to participate in global education programs and mobility options as part of their overall research training experience.²

2.8 The Faculty of Science at the University of Melbourne stated that some of the key benefits of international collaboration include:

- access to expertise and infrastructure not available in Australia.
- opportunities to showcase the ingenuity of Australian researchers and the quality of Australian science.³

1 ANSTO, *submission 25*, p. 4.

2 UNSW, *submission 28*, p. 3.

3 Faculty of Science, UoM, *submission 33*, p. 1.

2.9 Dr Mehmet Cakir provided another summary, stating that Australia obtains multiple benefits from participating in international research collaborations, including:

- enhance Australia's international research reputation
- enable a transnational research approach to solving common problems
- provide access to international knowledge and expertise
- provide access to international infrastructure and technology
- enable Australia to compare its research quality and expertise with that of other nations
- provide a stimulating environment which triggers new ideas, technologies and innovations
- provide social and economic benefits to Australia
- engender greater understanding of the causes and impacts of development in developing nations.⁴

2.10 The Juvenile Diabetes Research Foundation (JDRF) stated that a key benefit of international collaboration is access to sources of international funding, and added that its coordination of international research funding activities results in a net inflow of funds to Australia in the millions of dollars annually.⁵

2.11 Research Australia listed some of the direct benefits of international collaboration, particularly related to medical research fields:

- Access to complementary expertise, knowledge and skills that enhance scientific excellence. The motivation to find external expertise is particularly strong for smaller countries where national expertise may be absent.
- Access to unique sites, facilities or population groups.
- Sharing costs and risk that may be operational or where one country is the host to a large and expensive scientific endeavour to service regional research centres.
- Access to new funding opportunities.
- Contributions to solving global health issues.
- Accessing large population study cohorts.⁶

2.12 The Clinical Oncological Society of Australia (COSA) discussed the benefits of international collaboration to medical clinical trials:

... Australian researchers seek and have had success in achieving collaborations with international academic research groups.

4 Dr Mehmet Cakir, *submission 82*, p. 3.

5 JDRF, *submission 52*, p. 5.

6 Research Australia, *submission 62*, p. 5.

Multicentre clinical trials conducted through these international collaborations, have resulted in changes in standards and clinical practice guidelines, and have improved patient outcomes across a range of areas both in Australia and overseas.⁷

- 2.13 Professor Fiona Stanley AC stated that the sharing of data and ideas across nations will lead to more effective use of resources to address the big questions common to all nations. Professor Stanley provided an example:

... research consortia and international collaborations in childhood cancers can address the causes by each nation providing data on specific cancers and comparing the patterns of exposures and genetic/familial factors within and between countries. Studies of new treatments are best addressed by very large clinical trials such as those conducted by international consortia with results coming much more quickly and best practice being implemented locally.⁸

- 2.14 A key benefit of international collaboration is the development of regional relationships and partnerships. The Australian Centre for International Agricultural Research (ACIAR) stated that its activities are well acknowledged in partner developing countries, enhancing Australia's recognition in the region.⁹ ACIAR discussed its role:

[ACIAR] ... assists and encourages agricultural scientists in Australia to use their skills for the benefit of developing countries while at the same time working to solve Australia's own agricultural problems ...¹⁰

- 2.15 Professor Fiona Stanley AC discussed the need to collaborate with poorer countries:

... in my opinion, for the Australian government in particular is the moral imperative we have as a wealthy nation in our region with many nearby poor countries such as Papua New Guinea, to work collaboratively with them to achieve cost-effective solutions. Such cultural exchanges and collaborations in our region can only reduce the problem of security threats, reducing the risks of our own populations being affected by disease or other problems coming in from nearby nations etc.¹¹

7 COSA, *submission 50*, p. 4.

8 Professor Fiona Stanley AC, *submission 30*, p. 4.

9 ACIAR, *submission 27*, p. 7.

10 ACIAR, *submission 27*, p. 1.

11 Professor Fiona Stanley AC, *submission 30*, p. 5.