PRESIDENT'S FOREWORD

The Academy of Science has, for more than fifty years, promoted science and technology as the principal drivers of socioeconomic and environmental well-being. The Academy continued to fulfil its mission through provision of independent scientific advice and promotion of a scientific culture. I thank the Academy's 20 National Committees for providing, often at short notice, high level advice on issues of national import. These authoritative reports are referenced in the pages that follow and range from the promise of stem cell research to the role of nuclear power in Australia's future energy mix. In December 2006 the Prime Minister, writing to the Chief Scientist about the five-yearly review of the learned Academies, said 'the Academies have served and continue to serve an important purpose in providing informed and balanced policy debate and development on many national issues'.

We have engaged and encouraged early-career researchers into scientific careers and have continued a number of well-established initiatives to this end. These include the warm welcome given by Fellows to young scientists attending the annual *Science at the Shine Dome* events. Another significant event is the annual High Flyers Think Tank on a topic of national significance. The 2006 Think Tank, held in Adelaide in October, was most timely, focussed as it was on innovative technical solutions for water management in Australia. The final report, which was presented to PMSEIC, identified national strengths in membrane technology, moisture sensors, wireless computer networks and other technologies. However, the national policy position on GM plants for salinity and drought management was considered a significant weakness in Australia in implementing innovative strategies for water management.

The spectacular uptake of the Academy's *Primary Connections* initiative by primary schools across the nation is testimony to the dedication and commitment of Australia's teachers. Teachers, in their professional capacity, simply ask for the resources that enable them to be effective in their jobs and to make a difference to the students in their charge. The Academy is providing these curriculum resources, in partnership with the Department of Education, Science and Training (DEST), by connecting science with literacy. When students experience an exceptional, hands-on scientific event, it becomes an imperative to communicate that experience to others, perhaps as a written report, a diagram, a graph or an oral presentation. For students, and I suspect especially for boys, this places literacy in a practical rather than in an ephemeral context and inevitably becomes a rewarding experience for teachers and students alike.

At the time of writing, the Academy has provided about 20,000 curriculum resource units to teachers, at or below cost, to schools as far afield as Ngurrawanna Remote Community School (WA), Flying Fish Primary School (Victoria), Useless Loop Primary School (WA), Penguin School (Tasmania) and Fig Tree Pocket State School (QLD). In 2007, every Australian university that provides pre-service primary education is incorporating *Primary Connections* into their courses. This is a significant milestone for the Academy in ensuring the long-term success of the program.

At the secondary school level, the Academy is concerned at the continuing fall of enrolments in science and mathematics and has been working on an implementation plan to reverse this trend. Science is a disciplined and critical way of thinking that will help Australia's youth make evidence-based decisions as they go about their everyday lives. The Academy, working with an expert Reference Group, DEST and CSIRO Education, has devised an activity-based program for secondary science. A five-year business plan has been developed for consideration by the Australian Government in the context of the May 2007 Budget.

As you will see in the following pages, the Academy's international activities have continued to make significant contribution to Australia's scientific standing in the international arena. In December, the Academy of Science was elected to the Executive Committee of the InterAcademy Panel, a grouping of more than 90 national academies of science, and earlier in the year was confirmed as President-elect of FASAS, the Federation of Asian Scientific Academies and Societies.

I would like to thank outgoing Councillors, Michael Dopita, Les Field, Trevor McDougall and Lesley Rogers for their many activities over the years, especially in chairing and assisting conference organising committees. One of our Officers has come to the end of his term, John Shine, as Secretary (Biological Sciences) and Vice-President. John has given generously and graciously of his precious time and has had oversight of the B-side Sectional Committees and the processes for election of New Fellows for the past four years.

The Academy relies on sponsorship to undertake many of its activities and many of our initiatives are possible only through the generosity of our donors. I acknowledge their support and that of the Australian Foundation for Science, with unreserved thanks.

Kurt Lambeck PresAA FRS
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