



## EXCELLENCE IN SCIENCE

### New Fellows 2016

Former Australian of the year and mental health advocate Professor Patrick McGorry and Australia's Chief Scientist Dr Alan Finkel were among 21 leading scientists to be elected to the Academy in May.

The six women and 15 men have made outstanding contributions to a range of scientific areas including agriculture, advanced communications and cancer research.

Academy President, Professor Andrew Holmes AM PressAA FRS FTSE, congratulated all of the new Fellows elected this year for making significant and lasting impacts in their scientific disciplines.

New Fellows were admitted to the Academy in a formal ceremony in Canberra, and made presentations about their work at the Academy's annual flagship event, Science at the Shine Dome.

The 2016 Fellows are:

- Dr Ian Allison AO FAA, University of Tasmania
- Professor David Bellwood FAA, James Cook University
- Professor Benjamin Eggleton FAA FTSE, University of Sydney
- Emeritus Professor Geoffrey Fincher FAA FTSE, University of Adelaide
- Dr Alan Finkel AO FAA FTSE, Office of the Chief Scientist
- Professor Simon Foote FAA FTSE, Australian National University
- Professor J. Justin Gooding FAA, UNSW

- Dr John Kirkegaard FAA, CSIRO
- Dr Anna Koltunow FAA, CSIRO
- Professor Geoffrey Lindeman FAA, The Walter and Eliza Hall Institute of Medical Research
- Professor Alexander McBratney FAA, University of Sydney
- Professor Patrick McGorry AO FAA, Orygen: The National Centre of Excellence in Youth Mental Health, University of Melbourne
- Professor Neville Nicholls FAA, Monash University
- Professor Stephen Nutt FAA, The Walter and Eliza Hall Institute of Medical Research
- Professor Sarah Robertson FAA, University of Adelaide
- Professor Halina Rubinsztein-Dunlop FAA, University of Queensland
- Professor Susan Scott FAA, Australian National University
- Dr Daniela Stock FAA, Victor Chang Cardiac Research Institute
- Professor Fedor Sukochev FAA, UNSW
- Professor Toby Walsh FAA, UNSW
- Professor Naomi Wray FAA, University of Queensland

The Academy also admitted two new Corresponding Members:

- Professor John H Spence FAA, Arizona State University, United States
- Professor Matthias Hentze FAA, European Molecular Biology Laboratory, Germany

More information on the new Fellows and new Corresponding Members: <https://www.science.org.au/fellowship/fellows/new-fellows/fellows-elected-2016>

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## Honours and awards to Fellows

### Queen's Birthday honours

Former Academy President Professor Brian Anderson and polymers pioneer Professor David Solomon have been recognised with Australia's highest honour, Companion in the General Division of the Order of Australia, in the 2016 Queen's Birthday Honours list.

Professor Anderson AC FAFA FRS FTSE received the award for eminent services to information and communications technology, to engineering and higher education, as an academic, researcher and author, to professional scientific associations and as a mentor of young scientists.

Professor Solomon AC FAA FRS FTSE was recognised for eminent service to science in the field of polymer chemistry and plastics, and to professional scientific institutions.

Fellows recognised as Officers in the General Division of the Order of Australia were:

- Academy Vice President Dr TJ Higgins AO FAA FTSE for services to agricultural biotechnology
- Professor Nalini Joshi AO FAA, for distinguished service to mathematical science and tertiary education, as a role model and mentor of young mathematicians
- Professor Doug Hilton AO FAA FTSE, for distinguished service to medical research and education, and to gender equity and mentoring
- Professor John White AO FAA FRS for distinguished service to chemistry and for leadership of Synchrotron and neutron science projects in Australia and the Asia-Oceania region.

Fellows recognised as Members in the General Division of the Order of Australia were:

- Academy Council Member Professor Sue O'Reilly AM FAA for significant service to the earth sciences
- Professor Denis Evans AM FAA for significant services to chemistry and tertiary education.

The late Professor Michael Raupach AO FAA FTSE received a posthumous award for distinguished service to science in Australia and internationally as a leader in climate change research.

### Other honours and awards



(from left) Professor Hugh Possingham, Professor Paul Burn, Professor Jamie Rossjohn and Professor Peter Waterhouse.

- Professor Susan Scott FAA (and others), members of the gravitational wave team to share in major physics prizes
- Professor Hugh Possingham FAA, elected as a Foreign Associate of the US National Academy of Sciences
- Professor Richard Harvey FAA FRS, elected as a Fellow of the Royal Society
- Professor Ary Hoffmann FAA, elected as a Foreign Honorary Member of the American Academy of Arts and Sciences
- Professor Paul Burn FAA, Professor Jamie Rossjohn FAA and Professor Peter Waterhouse FAA, recently awarded ARC Laureate Fellowships.

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### Plant research focus of Macfarlane Burnet Lecture

Professor Graham Farquhar AO FAA FRS is this year's recipient of the Macfarlane Burnet Medal and Lecture. Professor Farquhar, from the Australian National University, presented the Macfarlane Burnet Lecture on 'Using simple mathematics to explore the plant-atmosphere exchange of carbon dioxide, oxygen and water vapour' at the Academy's Science at the Shine Dome event in Canberra in May.



Professor Graham Farquhar delivering the Macfarlane Burnet Lecture

The Macfarlane Burnet Medal and Lecture is the Academy's highest award in the biological sciences. Presented every second year, it is awarded in recognition of research of the highest standing in the biological sciences, and commemorates the contributions to science by Nobel Laureate Sir Macfarlane Burnet OM KBE FAA FRS. In his lecture, Professor Farquhar explained how plants have an exquisite sense of their environment and remarkable coordination in their responses. His discovery is that simple mathematical treatments based on physical, chemical or

economic models give order to our observations of plant behaviour, allowing us to make predictions, including about the effects of environmental or genetic perturbations. He discussed plant growth in a changing climate: predicted and observed multi-decadal changes in carbon dioxide concentration, precipitation and crop demand for water.

He emphasised that modern day research in plant physiology involves physics, mathematics, chemistry, botany, molecular biology, micrometeorology, soil science and other fields, and that theoretical plant physiology is starting to develop but needs to be strongly connected to experimental studies.

More about the Macfarlane Burnet Medal and Lecture: <https://www.science.org.au/opportunities-scientists/recognition/honoric-awards/career-awards/macfarlane-burnet-medal-and>

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## Laser pioneer tours Australia as Frew Fellow



*2015 Frew Fellow Professor Keller (second from right) with (from left) Academy Fellow Professor Hans Bachor, Chief Executive Dr Sue Meek, and President Professor Andrew Holmes.*

The Academy's 2015 Frew Fellow, Professor Ursula Keller, gave the Frew Lecture and toured Australia in April as part of the Academy's Geoffrey Few Fellowship. The Fellowship brings distinguished overseas scientists to Australia to participate in Australian Spectroscopy Conferences and to visit scientific centres.

Professor Ursula Keller is Director of the National Center of Competence in Research for Molecular Ultrafast Science and Technology (MUST) and heads the Ultrafast Laser Physics Research Group at ETH Zurich.

She gave a lecture at the 2015 Australasian Conference on Optics, Lasers and Spectroscopy (AZCOP) in Adelaide, and undertook a tour of Australian universities and research institutions.

Professor Keller is a pioneer of Laser Technology. Her inventions helped to make lasers the fastest probes available—quick enough to see the dynamics of atoms and molecules. She explained in her talks in Adelaide, Melbourne, Canberra and Sydney the science behind atto-second spectroscopy and how new technology and fundamental research stimulate each other. Through her work with lasers Professor Keller is demonstrating with impressive success that commercial activities in Europe are being built on such basic science foundations.

More about the tour and talks: <https://www.science.org.au/news-and-events/events/speed-limit-and-boundaries-measurable>

More about the Geoffrey Frew Fellowship: <https://www.science.org.au/opportunities/travel/travelling-fellowships/geoffrey-frew-fellowship>

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## Leading mineral deposits scientist receives Haddon Forrester King Medal

The 2016 Haddon Forrester King Medal was presented to Professor Murray Hitzman in March for the application of science to understanding the origin and discovery of mineral deposits.

The Haddon Forrester King Medal is awarded to scientists for original and sustained contributions to earth and related sciences. The award is for work of particular relevance to the discovery, evaluation and exploitation of mineral deposits, including the hydrocarbons. The medal is sponsored by Rio Tinto.



*Professor Hitzman (left) receiving the 2016 Haddon Forrester King Medal from Academy Vice-President Professor Jagdish.*

Professor C. Jagdish AC FAA FTSE, Vice President of the Academy, awarded the medal to Professor

Hitzman at the Academy's Shine Dome. After receiving his medal Professor Hitzman spoke on 'The Central African copperbelt: evolution of genetic models for the world's largest sedimentary rock-hosted stratiform copper district'. Mr Gerard Rheinberger, Exploration Director, Rio Tinto, concluded the dinner with an appreciation of Professor Hitzman's work from an industry perspective.

Professor Murray Hitzman is the Charles Fogarty Professor of Economic Geology at the Colorado School of Mines. He is recognised internationally as an authority on base-metal deposits—in particular, iron-oxide-copper-gold type deposits. He has distinguished himself as a first class researcher, educator and mine discoverer and developer, and is a scientific advisor to government. His achievements are based on field studies of many different types of mineral deposits and interpretations based on a deep understanding of the physics and chemistry of mineral formation. He discovered and developed the Lisheen lead-zinc mine in the Republic of Ireland, led the recognition and characterisation of a new type of mineral deposit—the iron-oxide copper gold or IOCG type—and studied the origin of the sediment hosted copper deposits of Central Africa. His work is having a growing impact globally on mineral exploration.

While in Australia, Professor Hitzman delivered lectures at Geoscience Australia, Monash University, James Cook University, the University of Western Australia, the University of Adelaide and the University of Tasmania. The lecture tour was made possible through additional funding from Rio Tinto.

More about the Haddon Forrester King Medal: <https://www.science.org.au/opportunities-scientists/recognition/honoric-awards/career-awards/haddon-forrester-king-medal>

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## 2016 Herbert Howe lecture series

Professor Mathai Varghese FAA delivered the 2016 Herbert Howe lecture series at the University of Denver in the USA in May. His public lecture was on string theory, which attempts to unify fundamental theories of physics including general relativity, quantum theory and electromagnetism. It was very positively received by undergraduates, graduates and staff. The lecture series is named in honour of Herbert Alonzo Howe, a 19th century professor of mathematics and astronomy at the University of Denver, and Denver's first astronomer.

Professor Varghese is an ARC DORA Fellow and is the Director of the Institute for Geometry and its Applications (IGA). He is also the Elder Professor of Mathematics within the School of Mathematical Sciences at the University of Adelaide, and an Adjunct Professor of Mathematics within the Mathematical Sciences Institute at the Australian National University. Professor Varghese was awarded the Australian Mathematical Society Medal in 2000.



*Professor Mathai Varghese*

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## Fellows in the news

Professor Martin Green has been part of a team setting a new world record for solar cell efficiency, a result that was almost 44% better than the previous record.

An expedition to Papua New Guinea and the Solomon Islands in search of rare animals for the Australian Museum will be led by Dr Tim Flannery.

Professor Ove Hoegh-Guldberg co-authored an analysis of the coral bleaching along the Great Barrier Reef, warning much of the reef will be lost over the next few decades. Terry Hughes says this summer's bleaching of the reef has been the worst on record.

Professor Ian Frazer was appointed chair of the Federal government's Medical Research Future Fund. He will lead an eight member board, one of whom is Doug Hilton, to allocate the investment of the Fund in medical research.

Professor Colin Masters will lead the Australian leg of a US clinical trial of an Alzheimer's disease medication, which will be the largest of its kind in the world. It's hoped the medication will slow or halt the onset of Alzheimer's disease.

Professor Helene Marsh co-authored a report for the Australian Council of Learned Academies on improving Australia's research training system.

Professor Hugh Durrant-Whyte joins an advisory board for the NSW Data Analytics Centre.



*From left: Ove Hoegh-Guldberg, Helene Marsh, Tim Flannery, Matthew Brown and Martin Green.*

Professor Matthew Brown is a senior co-author of a study which found five common inflammatory diseases occur together mostly because they share similar genetic backgrounds. In other genetics news, Professor Nick Martin co-authored a study which pinpointed two genes that increase the chance of mothers having non-identical twins.

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## 90th birthdays

The Academy sends warm congratulations to the following Fellows who celebrated their 90th birthdays this quarter:



*(left) Professor Allen Kerr AO FAA FRS, born 21 May 1926; Professor Robert Crompton AM FAA, born 9 June 1926, and Corresponding Member Sir David Attenborough OM CH CVO CBE FAA FRS, born 8 May 1926*

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## Obituaries

### **Joseph Mark Gani AM FAA 1924 to 2016**

Professor Gani was elected to the Academy in 1976. He was internationally recognised for his research in probability and statistics, and for his scientific leadership.

In 1994 Professor Gani informed the Academy that:

'My main research interests lie in the area of applied probability, or the application of probabilistic methods to real life phenomena. My contributions have been to storage and queueing theory, biological models (such as bacteriophages) and stochastic models in epidemiology including AIDS models. I have a general interest in biology and genetics, as well as cosmology.'

Professor Gani was a committed member of the Fellowship who generously gave his time to the Academy. He served as a member of the Sectional Committee responsible for Mathematics from 1975 to 78, 1980 to 81 and 1994 to 1998. He also served on the Publications Committee (1977 to 1978), the Japan Exchange and Fellowship (1998 to 1999), the Postdoctoral Committee (1999 to 2000), the Asia Exchange Program (1999 to 2000) and the FASIC Program Early Career Fellowships in 2013. Professor Gani served on the Hannan Medal selection committee (2001), the Moran Award for the History of Science Research selection committee (2014 and 2015) and on the Library Committee from 2001 to 2014.

Professor Gani died on 12 April 2016.



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## Early-career researchers produce map for the future of stem cell research

The 2015 Theo Murphy High Flyers Think Tank focused on stem cell research in Australia. Sixty early- and mid-career researchers came together in Sydney in July last year to discuss ways to support researchers and clinicians working in the field, how Australia should approach regulation, and what the public expects from stem cells.

Their findings provide a map for the future of Australian stem cell science and form a report which was launched in March by NSW Parliamentary Secretary for Regional and Rural Health, the Hon Sarah Mitchell MLC. The stem cell revolution: lessons and imperatives for Australia provides

recommendations on how Australia

can effectively take stem cell research from the lab bench to the hospital bed. It also discusses the rise of stem cell tourism and a regulatory environment, which presently allows unproven therapies to be marketed in Australia.



*(from left) Professor Les Field, Ms Sarah Mitchell, Dr Kathryn Davidson, Professor Richard Harvey and Dr Michael O'Connor at the launch of the 2015 Theo Murphy High Flyers Think Tank recommendation report.*

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## Think Tank 2016 welcomes this year's delegates

The Academy received more than 300 applications from early- and mid-career researchers to attend the 2016 Theo Murphy High Flyers Think Tank: An interdisciplinary approach to living in a risky world. Congratulations to the 60 candidates who have been selected to attend and we look forward to welcoming you in Canberra in July for two-and-a-half days of intense thinking and discussion about all types of risk.

The researchers were selected from a diverse range of disciplines to tackle important questions about risk. They will explore the issues of risk and uncertainty in the context of three major issues that affect the lives of all Australians:

- international security
- risk and resource allocation for the environment
- antimicrobial resistance in a connected world
- uncertainty, ignorance and partial knowledge.





The findings of the Think Tank will be published in a recommendations report which will be made publicly available. Reports from previous Think Tanks have been timely, well received and instrumental in influencing policy development.

The 2016 Think Tank is generously supported by the Theo Murphy (Australia) Fund, which is administered by the UK Royal Society.

More information about the Academy's Think Tanks: <https://www.science.org.au/news-and-events/events/think-tanks>

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## EMCR Forum activities

The EMCR Forum is the national voice of Australia's early- and mid-career researchers. The Executive Committee recently met face to face for their annual meeting and worked together to produce a strategic plan for the next five years.

Over the past few months the Committee met with the CEO of the NHMRC, Professor Anne Kelso, and the CEO of the ARC, Aidan Byrne, to discuss concerns about EMCR success rates in grant rounds. The EMCR Forum has also provided an EMCR perspective into the NHMRC's Structural Review.

The EMCR Forum is planning its next conference, Science Pathways 2016, which will be held in Sydney on 26-27 September. The topic is 'Future Leaders' to get EMCRs thinking about their personal leadership style and how they can develop themselves to inspire others.

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## National Committees for Science

### Biennial meeting of National Committees for Science Chairs

The Chairs of the Academy's National Committees for Science met at the Shine Dome in April for their biennial meeting. The committee chairs shared their short- and long-term goals and considered how they can enhance their work with the Academy to more effectively and strategically promote their disciplines. Academy President, Professor Andrew Holmes AM PresAA FRS FTSE, Vice-

Presidents Professor TJ Higgins AO FAA FTSE, Professor C Jagadish AC FAA FTSE and Foreign Secretary Professor Cheryl Praeger AM FAA also participated. A report of the outcomes of the meeting will be published on the Academy's website.



*The chairs of the National Committees met at the Shine Dome in April*

### Review into membership levels of ICSU unions

The Academy is undertaking a 10-year review into the benefits of membership of the International Council for Science (ICSU) and its member organisations. The Academy is Australia's adhering body to ICSU and 20 of its scientific unions and 11 interdisciplinary bodies. The review is expected to be complete in late 2016 and the recommendations will come into effect in 2017.

The National Committees, which advise the Academy on Australia's representation to the international unions, are being consulted throughout the review process. For more information about the review please contact the National Committees office at [ia@science.org.au](mailto:ia@science.org.au).

## Committees in focus

### *National Committee for Material Science and Engineering*

The National Committee for Materials Science and Engineering is aligned with the International Union of Materials Research Societies (IUMRS) and includes representation from the Australian Materials Research Society (AMRS). The committee chair will soon move from Professor Jim Williams FAA FTSE (ANU) to Professor Jagadish AC FAA FTSE.

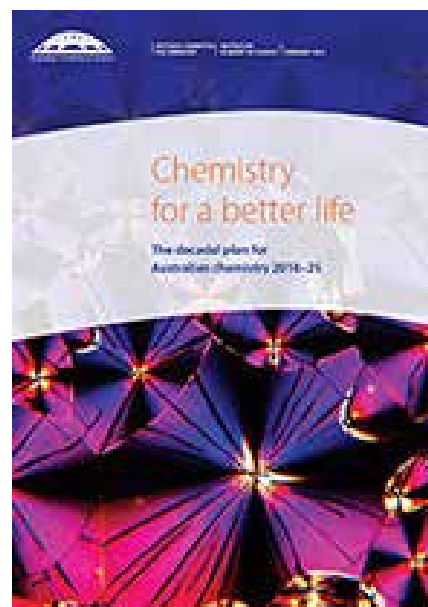
The committee believes that networking and engagement with the materials science community is vital for this highly interdisciplinary scientific discipline. Through the AMRS, which acts as an umbrella organisation with links to many Australian scientific societies, the NCMSE fosters and encourages discipline-wide communication, with a particular focus on early- and mid-career materials research scientists. The AMRS is pleased to be hosting the International Conference of Young Researchers in Advanced Materials (ICYRAM 2018) in Adelaide in October 2018 on the theme of Translating Science into Commercial Reality.

### *National Committee for Chemistry*

The National Committee for Chemistry is chaired by Professor Paul Mulvaney FAA. The committee advises the Academy on matters relating to the International Union for Pure and Applied Chemistry (IUPAC), which it undertakes in partnership with the Royal Australian Chemical Institute.

The committee seeks to shape future directions for chemistry in Australia through the production of a decadal plan for the discipline. The plan, Chemistry for a better life—the decadal plan for Australian chemistry 2016–25, was launched in February. It is the first step in advancing Australia's most important value-adding sector and the result of extensive consultation with the chemistry community. The plan proposes solutions to help Australia to reach its potential as a world class international manufacturing hub, contributing to Australia's prosperity.

In addition to its national strategy work, the committee works closely with the National Committee for Physics in nominating the biennial Geoffrey Frew Fellow. The Fellowship is presented to distinguished overseas scientists in order to participate in the Australian Spectroscopy Conferences and present travelling lectures around Australia. The current Frew Fellow Professor Ursula Keller from ETH Zürich participated in the Australian Spectroscopy conference ANZCOP in Adelaide in December 2015 and gave five stimulating talks in Melbourne, Canberra and Sydney in April 2016.



## More information

For more information on the meetings and other business of the 22 National Committees for Science, read the quarterly National Committees for Science Update newsletter, published for the information of the members: <https://www.science.org.au/news-and-events/newsletters/national-committees-science-updates>.

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## Decadal plan for mathematical sciences launched

Mid-level mathematics should be made a pre-requisite for students looking to enrol in science, engineering or commerce degrees according to a new ten-year plan for mathematics in Australia launched in March by the education minister.

Currently only 14 per cent of Australian universities require science students to have studied intermediate mathematics in Year 12.

Key recommendations of the plan, developed by the National Committee for Mathematical Sciences, include increasing professional development for out-of-field mathematics teachers and a new national mathematics



*At the launch of the mathematics decadal plan were, from left, Professor Jagadish, Professor Kerrie Mengersen, Professor Ian Chubb, Mrs Karen Andrews, Dr Steve Thornton and Dr Clio Cresswell.*

research centre to link industry and research. It also highlights an urgent need to address the low participation of women and rural Australians in the mathematical sciences.

The plan was developed after extensive consultation with mathematical scientists in schools, universities, government agencies and industry.

The formal launch by the minister Simon Birmingham at Parliament House was followed by an expert panel featuring former chief scientist Professor Ian Chubb AC FTSE, Assistant Science minister Mrs Karen Andrews, director of reSolve: Mathematics by Inquiry Dr Steve Thornton and QUT statistics professor Kerrie Mengersen. The panel was moderated by Sydney University professor and author of 'Mathematics and Sex', Clio Cresswell.

Read the Decadal plan for mathematical sciences: <https://www.science.org.au/support/analysis/decadal-plans-science/decadal-plan-mathematical-sciences-australia-2016-2025>



## INTERNATIONAL ENGAGEMENT

### Australian researchers to work with counterparts in Japan

A total of 22 researchers from Australia, selected by the Academy, are heading to Japan on fellowships awarded by the Japan Society for the Promotion of Science (JSPS).

Recipients of eight short-term Invitation Fellowships and one long-term Invitation Fellowship will collaborate with Japanese researchers, attend seminars and give lectures. Thirteen researchers will travel to Japan for one to two years as part of the JSPS Postdoctoral Fellowships for Foreign Researchers to conduct cooperative research with leading research groups in universities and other Japanese institutions.

More about the successful applicants: <https://www.science.org.au/opportunities/travel/grants-and-exchange/japan-society-promotion-science-fellowships>

The JSPS awards postdoctoral and invitation fellowships are worth up to \$2 million to Australian researchers annually. The Academy manages the application process with funding support from the Department of Education and Training.

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## Researcher on food security and fisheries is Australian nominee for ASPIRE Prize

Associate Professor Lee Baumgartner from Charles Sturt University is this year's Australian nominee for the APEC science prize for innovation, research and education (ASPIRE) for his work on food security and fisheries in developing nations.

The nomination was announced by the Minister for Industry, Innovation and Science the Hon Christopher Pyne MP at the University of Adelaide in April.

The annual ASPIRE Prize recognises young scientists from APEC economies who have demonstrated a commitment to both excellence in scientific research, as evidenced by scholarly publication, and cooperation with scientists from other APEC member economies.

Each member economy is invited to nominate one scientist under the age of 40 to be considered for the prize.

The call for applications for the ASPIRE Prize in Australia was administered by the Academy, with the winner of the APEC ASPIRE Prize to be announced in Peru in August.

The Australian runners-up for this year's prize were Dr Margaret Hardy from the University of Queensland and Dr Wei Xu from Murdoch University.



*From left: Professor Warren Bebbington, Vice Chancellor, University of Adelaide; Academy Fellow Professor Bob Vincent, University of Adelaide.; Matt Murray, Economic Counsellor, Embassy of the United States of America; Australian ASPIRE nominee Associate Professor Lee Baumgartner, Charles Sturt University; and the Hon Christopher Pyne MP, Minister for Industry, Innovation and Science. Credit: T. Edwards, Department of Industry, Innovation and Science*

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## Australian PhD students compete in Entrepreneurship Challenge

In early June, 45 Australian PhD students competed in the first Australian–French Entrepreneurship Challenge, held at the College for Business and Economics at the Australian National University.

The national competition provided participating researchers the opportunity to build networks with French businesses and institutions. It also contributed to Australia's innovation and economic goals in fostering international industry–research links.

Working in pre-selected teams of up to six, participants were challenged to design a start-up in a relevant field. In the first few hours of the event participants attended workshops and accessed expert mentoring to provide the skills to go through the process. Over a continuous 24 hour period each team required resilience, creativity,



*Participants, coaches and guests at the launch of the Australian–French Entrepreneurship Challenge in June. Photos: Tim Edwards, Department of Industry, Innovation and Science*



*The winning team—Guardia . From left: David Hazlehurst, Deputy Secretary, Department of Industry, Innovation and Science; Ambassador of France, His Excellency Mr Christophe Lecourtier; Robert Crombie, AusIndustry; Linda Khong, the University of Notre Dame; Ariel Zeleznikow-Johnston, the University of Melbourne; John Rivers, ANU; Amanda Vrselja, Monash University, Spence Richardson, ANU, Lara Bereza-Malcolm, La Trobe University and Thibaud Dumas, Université Pierre et Marie Curie (Paris 6). Photo: Embassy of France in Australia*

teamwork and a willingness to take risks in order to come up with a pitch to win over a grand jury of expert entrepreneurs, scientists and managers.

Participants competed for the opportunity to travel to France for a first-hand experience of the country's innovation system. The winning team created a start-up project called Guardia—a rapid, on-site detection of Giardia concentration in water using a low-cost, clip-on smartphone device. Team members were:

- Lara Bereza-Malcolm from La Trobe University
- Linda Khong from the University of Notre Dame
- Spence Richardson and John Rivers from the Australian National University
- Amanda Vrselja from Monash University
- Ariel Zeleznikow-Johnston from the University of Melbourne.

The team was assisted by Thibaud Dumas from the Université Pierre et Marie Curie (Paris 6) and coached by Robert Crombie from AusIndustry.

The challenge was facilitated by Clarisse Angelier from the National Association for Research and Technology in France, and Alistair Kay from AusIndustry. Each team was assisted by a student from the CIFRE (France's system of industrial agreements for training through research) Industry-PhD program and a French or Australian coach, including Peter Batchelor, Robert Crombie and Malcolm Donnell from AusIndustry, David Burt from CSIRO, Mathew McGann from Health Horizon, Geoff Rogers from IntelliMedical Technologies, Robert de Quelen, an independent coach and consultant from France and Renaud Redien-Collot from Novancia Business School in Paris, father of Les 24h Chrono de L'Entrepreneuriat in France.

The grand jury was made up of Petr Adámek from KILN Incubator, Professor Michael Cardew-Hall from The Australian National University, Francois Duthoit from DCNS, Rosie Hicks from the Australian National Fabrication Facility, Coumar Odea from Airbus DS—Space Systems, Tony Peacock from CRC Association and David Singleton from Engineers Australia.

The challenge was supported by the Australian Academy of Science, the Department of Industry, Innovation, Science and Research, the Embassy of France in Australia and the Australian National University, and sponsored by AIRBUS Group Asia Pacific, DCNS, KILN Incubator and Engineers Australia.

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## Research seminars in Malaysia foster collaboration

Australian experts continue to highlight Australia's research expertise through a series of seminars organised by the Academy and the Office of the Counsellor (Education and Science) at the Australian High Commission in Kuala Lumpur. Supported by the Australian Department of Education and Training, the seminars encourage collaboration between leading Australian and Malaysian researchers.

“ *The seminars encourage collaboration between leading Australian and Malaysian researchers.* ”

Following a visit by Professor Hugh Possingham FAA in February, Dr Richard Thornton from the Bushfire and Natural Hazards CRC and Mr Martin Wehner from Geoscience Australia visited Malaysia in March. They gave joint presentations and engaged in discussions at the Universiti Teknologi Malaysia in Johor, at the Universiti Malaysia Terengganu in Kuala Terengganu, and at the Razak School of Government in Putrajaya, in the area of disaster management—in particular floods. They also visited the National Disaster Management Centre, which has recently been formed under the Malaysian Prime Minister's department.

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## Independent research fund launched in Indonesia

A new fund in Indonesia established by President Joko Widodo will provide around US\$50 million a year to fund about 200 research proposals.

The Indonesian Academy collaborated with Indonesia's ministries of finance and national development planning as well as international partners from the US, UK and Australia to create the Indonesian Science Fund (ISF), a funding body independent from the government bureaucracy.

The Academy's Foreign Secretary Professor Cheryl Praeger AM FAA attended the fund's launch at the invitation of the Indonesian Academy of Sciences' President, Professor Sangkot Marzuki.

The launch featured a talkshow entitled 'Promoting Scientific Culture of Excellence', at which Professor Praeger gave a presentation on lessons from Australia's scientific development. Other international invited guests and speakers included former Obama envoy to Indonesia Dr Bruce Alberts, and United States' Science Envoy for the Ocean, Dr Jane Lubchenco.



*The Academy's Foreign Secretary Professor Cheryl Praeger at the launch of the new research fund with Professor Sangkot Marzuki, President of the Indonesian Academy of Sciences*

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## Supporting stronger research collaborations between Australia and Papua New Guinea

Professor Teatulohi Matainaho, Chairman of the Papua New Guinea Research, Science and Technology Council and Chief Executive Officer of the PNG Research, Science and Technology Secretariat, visited Canberra in April to participate in the Future Earth Australia workshop. The Academy also organised meetings between Professor Matainaho and Dr Alan Finkel AO FAA FTSE, Australia's Chief Scientist, Professor Aidan Byrne, CEO of the Australian Research Council, and Professor Anne Kelso, CEO of the National Health and Medical Research Council.

As the Chief Science Advisor to the Government, Prof Matainaho is responsible for coordinating scientific and research advice from the PNG Research, Science and Technology Council to the PNG Government.



*The Academy's Foreign Secretary Professor Cheryl Praeger with senior PNG science advisor Professor Teatulohi Matainaho*

The Academy is keen to develop greater links with PNG and Professor Cheryl Praeger AM FAA, Foreign Secretary, met with Professor Matainaho to explore ways to strengthen research collaborations between Australia and PNG.

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## First Australia–Brazil exchange program achieves outstanding outcomes

Six outstanding Brazilian students recently spent eight weeks conducting research in Australian institutions. Their achievements in that short time include scientific papers, a public presentation, and a tri-country collaboration.

The Academy's inaugural Australia–Brazil PhD Exchange Program provided Brazilian second- or third-year PhD students a first-hand research experience in Australia, orientation in Australian culture, and an introduction to the science and research infrastructure of Australia. The students arrived in Australia at the end of March and returned to Brazil in June.

The program began with an orientation in Canberra, which introduced the students to Australian culture through visits to Parliament House, the National Arboretum and the National Gallery of Australia. They also learned about wildlife, bush tucker and Australia's Indigenous history at Tidbinbilla Nature Reserve.

The Brazilian Ambassador, His Excellency Mr Manuel Innocencio de Lacerda Santos Jr, met with the students at the Embassy of Brazil to learn more about their research.

Near the end of their time in Australia, the students returned to Canberra to share their experiences with one another and the Academy, and to attend Science at the Shine Dome, including workshops for early- and mid-career researchers, the annual gala dinner and the public symposium.



*The Brazilian Ambassador, His Excellency Mr Manuel Innocencio de Lacerda Santos Jr (centre), with exchange program participants (from left) Diogo Henrique Costa Rezende, Carolina Tavares de Freitas, Bruna Durante batiste, Lucas do Nascimento, Helena Dias Muller Villela and Alisson Paulino Trvizol at the Academy's annual dinner during Science at the Shine Dome. Photo: Mark Graham*

Despite the students' relatively short time in Australia, some early but outstanding outcomes were achieved. Multiple papers were drafted and submitted to relevant journals for publication and one student presented an overview of his research at a public seminar at the UNSW School of Photovoltaic and Renewable Energy Engineering. Another student was instrumental in the establishment of a multi-centre, multilateral project on transcranial magnetic stimulation (TMS). The collaboration will enable TMS technology created at Harvard University to be shared with Australian and Brazilian research institutions.

The Australia–Brazil PhD Exchange Program was made possible with funding from the Australian Government Department of Education and Training. The department will fund further rounds of the program in 2017 and 2018.

More information about the students, their research and their Australian host researchers: <https://www.science.org.au/news-and-events/news-and-media-releases/first-academy-australia-brazil-exchange-begins>

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## Academy elected to the Executive Committee of the IAP



*Professor Kurt Lambeck attended the IAP General Assembly in March*

The Australian Academy of Science has been elected to the Executive Committee of the IAP: the global network of science academies.

IAP was launched in 1993 and includes 111 science academies from around the world. Its primary goal is to help member academies work together to advise citizens and public officials on scientific aspects of critical issues. IAP programs involve interdisciplinary activities and studies on matters related to science and technology.

Professor Kurt Lambeck AO FAA FRS, former President of the Academy, attended the IAP General Assembly which was held in Hermanus South Africa in March. At this meeting, the Academy was elected to the IAP Executive Committee along with the African Academy of Sciences, Academia Chilena de Ciencias, the Academy of the Islamic Republic of Iran, the Korean Academy of Science and Technology, and The Royal Society, UK. The Academy previously served on the IAP Executive Committee from 2007 to 2012.

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## SMARThealth focus for scientists in Australia, India and Indonesia

*Contributed by Anushka Patel, ANU*

Australian, Indian and Indonesian scientists are collaborating to implement and evaluate a cardiovascular disease prevention program in East Java called SMARThealth—Systematic Medical Appraisal, Referral and Treatment of cardiovascular disease. The program was developed through connections made at a joint Australia–Indonesia health workshop arranged by the Australian Academy of Science and the Indonesian Academy of Sciences in Jakarta in May 2015. It is funded by a US\$1 million philanthropic donation.

Cardiovascular diseases (CVD) and related conditions are now a leading cause of premature death and disability in many low- and middle-income countries, including Indonesia. Rural communities in these countries have very few, if any, resources available for effective identification and management of people at high CVD risk.

“ *Cardiovascular diseases (CVD) and related conditions are now a leading cause of premature death and disability in many low- and middle-income countries* ”

### About SMARThealth

Over the last several years, The George institute for Global Health has developed an innovative strategy to improve cardiovascular disease (CVD) risk management in these rural communities. The SMARThealth system comprises:



- a mobile device-based clinical decision support system for CVD risk management
- task-shifting traditional physician roles to non-physician healthcare workers
- integration of the overall system within the public primary healthcare infrastructure.

The system was developed and successfully implemented in the south Indian state of Andhra Pradesh, and is currently in the final stages of a randomised controlled trial involving approximately 80,000 adults at risk of CVD.

For broader impact, a crucial question is the extent to which the SMARThealth program can be rapidly customised and scaled up in health systems that might differ substantially from that in which the program was developed. The George Institute was approached by a philanthropic donor to consider extending the program to other systems, including in Indonesia. In a demonstration project, researchers from the University of Brawajiya will customise and implement SMARThealth to Kabupaten Malang (Malang Regency) in East Java, Indonesia, with trained primary care doctors and non-physician healthcare workers (Kaders) serving a population of approximately 48,000 adults. This will be undertaken in collaboration with local government, to maximise the potential for uptake and scale-up. Outcomes from this implementation study will be available in mid-2018.

## SCIENTIFIC LITERACY

### Science shines at the Dome

Bionic eyes, melting Antarctic ice, 3D printing body parts and the language of fish bones were among the exciting topics covered at the 2016 Science at the Shine Dome.

The event saw 21 new Fellows inducted into the Academy in recognition of their work in science, and each presented research ranging from cutting edge cancer treatment and advanced communications to agriculture and mathematics.

On day two, Academy awardees were given the chance to share their research with the Academy's Fellows and members of the public. Award recipients, such as Professor Graham Farquhar who received the 2016 McFarlane Burnet Medal, spoke on subjects including plant biology, solar energy, biodiversity, oceans and waves, immunology, astronomy, geology and the evolution of animals.

The final day was an exploration of bionics, titled 'Human +Plus', and some of Australia's leading researchers in the field shared the latest in bioengineering, bioelectronics, prosthetics and ideas for the future of bionics.

The inspiring talks are available on the Academy's YouTube channel: [https://www.youtube.com/playlist?list=PL9DfJTxCpaXLXQdm-C50YRycXpvxmOQD\\_](https://www.youtube.com/playlist?list=PL9DfJTxCpaXLXQdm-C50YRycXpvxmOQD_).

See photos of the event: <http://markgraham.photoshelter.com/gallery/SATS-16/G0000I8daGCzcBcs>. Password is 61STAS; please credit Mark Graham if using the images.



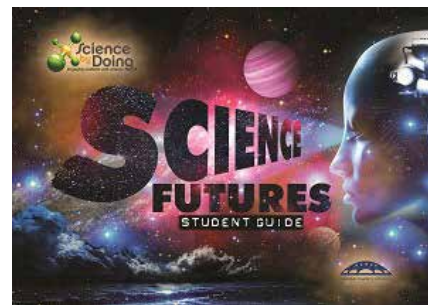
*Newly elected Fellow, Professor David Bellwood from James Cook University, presenting on coral reefs during Science at the Shine Dome in May. Photo: Mark Graham*

## Science by Doing tops 90,000 registrations

The number of registrations to the Science by Doing website has passed 90,000, with two-thirds of Australian high schools using the Academy's innovative high school science resources.

The final Year 10 unit, Science Futures, has now been added to provide a complete updated package of Science by Doing curriculum units for Years 7 to 10.

In May alone, the number of hits (interactions) on the Science by Doing website was an impressive 3.8 million.



*Science by Doing's final Year 10 unit has now been completed*

## Primary Connections supports remote and Indigenous students



*The Academy's Primary Connections program connects children from Tjuntjuntjara with the world around them through inquiry, questioning and investigation. Teacher training (centre bottom) is crucial to the success of Primary Connections.*

Primary Connections recently held an introductory workshop in Perth to help support teachers from schools with significant Indigenous enrolments. The workshop was fully funded by donations made through the Academy's Enlightening campaign, giving teachers from remote communities the opportunity to attend.

Tjuntjuntjara Remote Community School is Australia's most remote school, in the Great Victoria Desert close to the border with South Australia, 680 kilometres north-east of Kalgoorlie. The school has 30 students from the Ananyu (arn-a-noo) community, whose first language is Pitjantjatjara and second is Aboriginal English.

Jennifer Frost, who received an Enlightening travel bursary to attend the April workshop, has lived and worked in isolated communities throughout her life.

'Working at Tjuntjuntjara is very challenging but, as much as it's a cliché, it is very rewarding. The children are free spirits and certainly keep you on your toes, but they are genuinely caring and eager to learn new things,' she said.

“ *Just like children anywhere else in the world they are fascinated and intrigued by science. They are also very willing to share their world and cultural knowledge with you.* ”

'Just like children anywhere else in the world they are fascinated and intrigued by science. They are also very willing to share their world and cultural knowledge with you.'

Jennifer said the structure of the Primary Connections program has helped overcome several issues including student transience (moving from one community to another for cultural business).

'An advantage of using PC is the children's familiarity with the content and processes which assists them settling back into the classroom routine when they return,' she said.

Most of the students also have hearing difficulties, and units such as 'Look! Listen!' have proven useful tools to engage students to listen and focus on the world around them.

'PC connects these children with the world around them in a different way through inquiry, questioning and investigation. The inquiries are easily adaptable to suit the environment that they are conducted in,' Jennifer said.

School principal Charlie (Wilbur) Klein was eager for Jennifer to attend the workshop.

'We see this as an excellent opportunity to provide professional learning to support our science program and improve our knowledge and skills. On Jennie's return we will utilise her increased knowledge and understanding through a local professional learning activity to share the learning with the whole staff,' Charlie said.

Jennifer is currently training new teachers at her school with the knowledge she gained from the workshop and on behalf of all the staff and students at her school has expressed her gratitude to donors for helping the school community.

More about Primary Connections: <https://primaryconnections.org.au/>

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## Academy presents at international education conference

Shelley Peers from Primary Connections represented the Academy and the Association of Academies and Societies of Sciences in Asia (AASSA) as the Asia-Pacific Regional Network Co-ordinator at the IAP Science Education Programme Global Council meeting in Santiago in April. The Global Council meets annually and oversees IAP activities which promote scientific literacy. The major outcomes of the meeting included a proposal to seek funding to develop school materials about the eradication of the Zika virus.

The Global Council meeting was held in conjunction with an IAP SEP biennial international science education conference titled 'International Conference on

Improving the Learning of Biology and other Related Sciences in Years K-12'. It was organised by RELAB (The Latin American Network of Biological Sciences) and the University of Chile. Shelley presented on Primary Connections in the session on exemplary national inquiry-based school programs.



*Primary Connections' Shelley Peers presenting at the international education conference hosted by the University of Chile in April.*

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## New mathematics program on track

It's full steam ahead for the Mathematics by Inquiry team. The program has a new name (reSolve), a logo, and a new fact sheet. The project has generated great interest at public presentations and consultations with education systems in every Australian state during the past two months. The writing team is working on classroom resources for years 5 to 8 which will be trialled nationally in July, in preparation for more widespread trialling and distribution from the end of October.

Find out more about reSolve: Mathematics by Inquiry: <https://www.science.org.au/learning/schools/resolve>



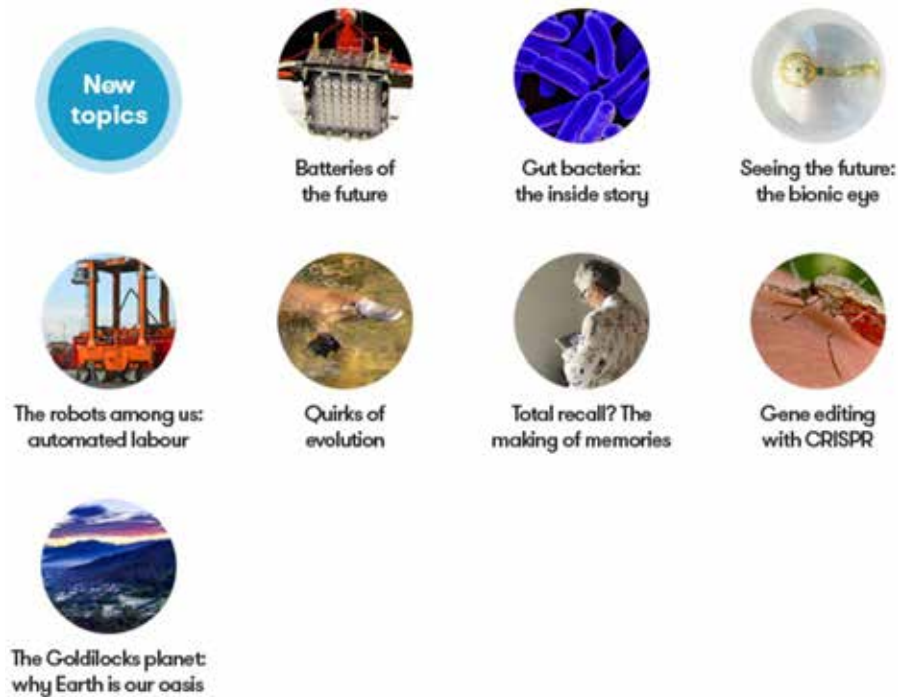
Information on reSolve is also available by photographing the QR code with a mobile device.

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## One year on: the re-imagination of Nova

The end of June will mark one year since the Academy relaunched Nova, the popular science explainer website. The new site has received very positive feedback from scientists, science communicators, students, teachers, and all manner of curious minds.

By the end of the month Nova will have 70 diverse topics online, with recent topics including gene editing with CRISPR, quirks of evolution, why Earth is our oasis, and the making of memories. These expert-reviewed topics are supplemented with infographics, interactive diagrams, videos and more—Nova is aimed to be of interest to anyone who is curious to learn something new.



If you haven't already seen the website, be sure to visit [nova.org.au](http://nova.org.au). You can also browse by infographic or browse by video.

Nova also recently published its first original short videos: waste in space and the weird sex chromosomes of the platypus. So far, they've both had thousands of views on Facebook. Watch out for new videos soon.

The Academy thanks all the expert reviewers who have helped to create and review content for Nova. We can't wait to share what's coming soon.

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## Latest issue of Historical Records of Australian Science out now

The latest issue of the Academy's journal, Historical Records of Australian Science, is now online: <http://www.publish.csiro.au/?nid=108>.

From science in Sydney prior to 1821, to Australian vegetation and exploration, the June issue is an engrossing and enlightening read.

Also in this issue are memoirs for Professor Lawrence Lyons FAA, Professor Robert Sutherland AO FAA, Professor Ray Stalker FAA FTSE and Dr Shirley Jeffrey AM FAA.

Fellows of the Academy can access the online journal through the Fellows section of the Academy website. A printed copy of the journal can be ordered through CSIRO, and public access to articles is available on a paid basis.

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## Event news: speaker series and On the Job video project

### National speaker series—the science of life and death



Tickets are on sale for the first in the Academy's national series of talks, Death in Hobart, on 27 June. While modern society embraces and celebrates new life and various milestones, the topic of death has become taboo. In this event, we'll look at death from three fascinating angles: from preventing death and identifying the exact moment of death, to the science and logistics of mass death events, and why scientists are burying bodies in the Blue Mountains. Join a trio of seasoned death experts—Professors Roger Byard, Shari Forbes and David Caldicott, along with science broadcaster Bernie Hobbs—for a lively discussion on a deathly topic.

This series of special events will push us to the edge of our comfort levels, starting a national conversation about life, death and beyond. This Inspiring Australia event is supported by the Australian Government.

The series is convened by Associate Professor Bryan Fry and Professor Jenny Graves AO FAA. Following Hobart, the series continues with Sex in Melbourne on 26 July and Murder in Brisbane on 16 September, with Life in Perth and Immortality in Adelaide following on. Book tickets now for what is set to be a fascinating series of events.

Sponsors for this series are:

- major supporter—Inspiring Australia
- series production partner—Science & Technology Australia
- series education partner—Nova: science for curious minds.

### Canberra speaker series—Bots, bacteria and booze: science of the everyday



The April public talk by Professor Tanya Monro FAA FTSE provided a fascinating insight into how the science of photonics has transformed our lives, from lasers to optical fibre communication networks. Professor Monro

explained how light is now being used to unlock the secrets inside objects as diverse as the human body, wine barrels and exploration holes deep within Earth's crust. She presented emerging research in materials science, new nanofabrication technologies, photonics and surface science with novel approaches to sensing and measurement. This transdisciplinary approach is shifting the questions that it is possible to ask in fields including embryology and cancer treatment, and opening up opportunities for new industries.

The June talk, Putting the balance back in diet, was of interest to just about everyone. Professor Stephen Simpson AC FAA FRS introduced a framework called 'nutritional geometry' that captures the multidimensional nature of nutritional requirements and the consequences of eating different diets for reproduction, ageing, obesity and cardio-metabolic health—in flies, mice and people.

The next event in the 'Bots, bacteria and booze' series, on 16 August, is on Making health food taste great.

Sponsors for this series are:

- wine Sponsor—Jirra Wines
- catering Sponsor—Edge Catering
- April Talk Sponsor—Institute for Photonics and Advanced Sensing - University of Adelaide.

### 'On the Job' filming underway



*Vanessa Mollard from the University of Melbourne, one of the finalists in the On the Job National Science Week project*

The seven finalists for our On the Job National Science Week project (<https://www.science.org.au/news-and-events/events/on-the-job>) have been selected, and filming of each finalist has started.

This video series will show a day in the life of seven Australian science support staff. We'll explore science behind the scenes to uncover and celebrate the fantastic work being done all around the country to keep Australia's scientific progress moving.

Finalists are:

- Matthew Bell—ANSTO
- Nardia Bordas—Edith Cowen University
- Duane Chapman—Victor Chang Cardiac Research Institute
- Madeleine Flynn—QIMR Berghofer Medical Research Institute
- Patricia Gadd—ANSTO
- Vanessa Mollard—University of Melbourne
- Peter Thomas-Hall—Australian Institute of Marine Science

More about the finalists: <https://www.science.org.au/news-and-events/events/on-the-job/finalists>

The videos will be published online in National Science Week, 13–21 August, with a public vote for the winner. The Academy has partnered with Australia's Science Channel to produce this great series.

This Inspiring Australia initiative is supported by the Australian Government as part of National Science Week.

## INFLUENTIAL VOICE

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### Science in the 2016–17 federal Budget

The Academy welcomed support for science in the government's 2016–17 May Budget as an indication of long-term commitment to science in Australia. New measures included an additional \$200 million for Antarctic science and \$100 million for Geoscience Australia. The Budget also featured extended funding for the Australian Astronomical Observatory, additional support for research infrastructure, and an allocation for the Australian Nuclear Science and Technology Organisation.

Media release responding to the Budget: <https://www.science.org.au/news-and-events/news-and-media-releases/academy-welcomes-funding-boost>

Summary of science, research, innovation and higher education measures in the Budget: <https://www.science.org.au/supporting-science/science-policy/submissions-government/summary-2016-17-federal-budget-science>

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### Academy urges political parties to prioritise STEM

The Academy has urged all parties to prioritise science, technology, engineering and mathematics (STEM) education before the federal election on 2 July.

In its election statement, the Academy emphasised the need for science and innovation to be at the heart of economic and social policy.

Top of the Academy's list are a rebalance of government incentives for industry research and development, gender parity on government science boards, and a boost to STEM education in regional and remote Australia.

Specific priorities in the Academy's election statement include:

- \$28m for STEM education including teacher training and evaluation
- targets for gender parity on government STEM boards and appointments
- a \$40m expansion in long-standing and strategically important international science partnerships
- a shift in the ratio of direct to indirect government support for industry R&D from 10:90 to 20:80 by 2020.

“ *The Academy emphasised the need for science and innovation to be at the heart of economic and social policy.* ”

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## Future Earth Australia workshop



*Academy President Professor Andrew Holmes addressing the Future Earth Australia workshop in April*

A two-day 'Future Earth' sustainability workshop in April brought together leading thinkers from Australia and the region to discuss the complex interplay of environmental, economic, cultural and social issues, and examine ways to enable Australia to design a sustainable future.

Future Earth Australia is a project of the Australian Council of Learned Academies (ACOLA) led by the Academy of Science that is seeking to develop an Australian node of the international Future Earth Program. Future Earth is a major international research program sponsored by the Science and Technology Alliance for Global Sustainability that brings together over 60,000 natural and physical scientists and has leveraged over \$10 billion sustainability research investment around the world.

Following the workshop, a strategic plan for Future Earth Australia will be finalised and it is anticipated that an establishment phase will commence with support from CSIRO and university groups from July.

A blog post by the Academy's policy intern, Megan Evans, provides more information on the workshop: <https://storify.com/megcevens/future-earth-australia-workshop>.

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## Climate Science Capability Review

The Academy is conducting a formal review of Australia's needs and capabilities in the area of climate science.

Headed by Professor Trevor McDougall FAA, the review will assess Australia's current climate science expertise and infrastructure, determine which current climate science capabilities are critical to the national interest, and explore what should be maintained or developed into the future.

Members of the committee have expertise in meteorology, international research hubs, atmospheric research, climate adaptation and other areas of climate research. The



*Professor Trevor McDougall is leading the Academy's climate science capability review*



committee is seeking submissions from members of the climate science community. More information is available here: <https://www.science.org.au/supporting-science/other-initiatives/australian-climate-science-capability-review>.

## OPERATIONAL EXCELLENCE

### Annual Giving Program to support science in Australia

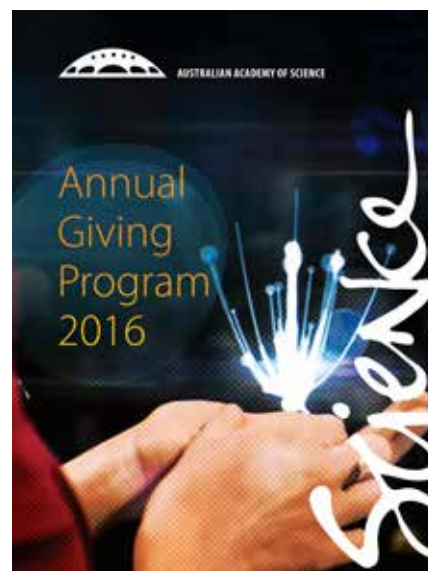
The Annual Giving Program for 2016 will enable the Academy to continue its strong support for science in Australia.

Since the Academy was established in 1954, private gifts and bequests have enabled the Academy to recognise and grow Australia's scientific excellence. The broad benefits include world-class education programs; recognition of outstanding scientists; raising awareness of science; and funding for scientists to pursue knowledge and collaborations in Australia and around the world. The Australian Research Council, Science and Technology Australia, the ABC Science Unit and the Nova science website all got their start with support from the Academy.

The Annual Giving Program, launched in May, is an invitation to join the Academy's distinguished group of donors and make science a vital, viable and visible presence in Australia.

Thank you to those who have already responded to the Annual Giving Program; the Academy greatly appreciates your support and looks forward to keeping you informed of future achievements.

Find out more about the Annual Giving Program: <https://www.science.org.au/about-us/support-us/annual-giving-program>



### 2015 Annual Report

The Academy's 2015 new format Annual Report, published in May, features highlights of the Academy's achievements for the period April to December 2015 (due to a transition to calendar year reporting). Fully online for the first time, the Annual Report outlines activities and achievements under five strategic themes: excellence in science, international engagement, scientific literacy, influential voice, and operational excellence. The report also features video introductions by the President and Chief Executive.

Read the Academy's 2015 Annual Report: <https://www.science.org.au/annual-report-2015/>



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## Changes to the Academy Council



*(from left) New Secretary Physical Sciences, Professor Jim Williams; new Council members Professor Sam Berkovic (biological sciences) and physical scientists Professor Elaine Sadler, Professor Scott Sloan and Dr Steve Rintoul*

Retiring members of the Academy's Council were honoured and new members appointed at the Australian Academy of Science's Annual General Meeting in May.

Leading physicist and academic Professor C Jagdish AC FAA FTSE retired as the Academy's Secretary Physical Sciences and Vice President; materials scientist Professor Jim Williams AM FAA FTSE stepped into the role. Other retiring Council members were ordinary members in the physical sciences, Professor Brian Schmidt AC FAA FRS Nobel Laureate, Professor Bob Vincent FAA, and ordinary member in the biological sciences, Professor Peter Koopman FAA. Replacing them will be Professor Sam Berkovic AC FAA FRS (biological sciences), and physical scientists Professor Elaine Sadler FAA, Professor Scott Sloan FAA FRS FTSE and Dr Steve Rintoul FAA. Academy President Professor Andrew Holmes AM PresAA FRS FTSE welcomed the new members and thanked those retiring for their service to the Academy.

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## Changes at the Secretariat

The Chief Executive, Dr Sue Meek AO FTSE, has announced her intention to leave the Academy on 1 July to focus on other professional commitments in the science sector and increase her engagement in some additional interest areas. The Academy's Council is working to identify a suitable successor.

Also leaving is Director Communications and Outreach, Kylie Walker, who is taking up the role of CEO of Science & Technology Australia.

Research Manager, Dr Peter Thomas, is joining the Australian Association of Medical Research Institutes as Director of Policy and Operations, while Media Officer Bella Counihan left in early May to take up the role of Strategic Communication Manager for Universities Australia. The Academy's new Media Officer, Dion Pretorius, has joined us from the NGO Soldier On.



*Dr Sue Meek*

The Academy welcomes Dion and wishes Sue, Kylie, Peter and Bella all the best in their future endeavours.