

# Shine On



**Here at the Australian Academy of Science, we strive to champion, celebrate and support excellence in Australian science, promote international scientific engagement, build public awareness and understanding of science and provide independent, authoritative and influential scientific advice.**

**While we work tirelessly to achieve these outcomes, we know there is still an enormous amount to be done to ensure a vital, viable and visible presence in Australia. Your support contributes to our success, and for that we say thank you.**

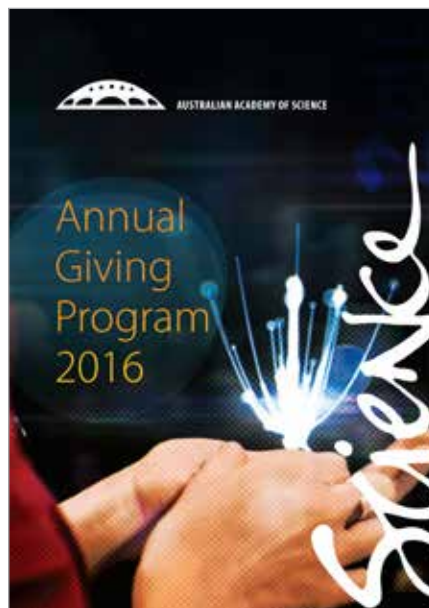
**We are delighted to bring you this report so you can see how your support is bringing us closer to achieving our vision.**

## *Annual Giving Program supports Academy's work*

The Academy launched its Annual Giving Program last May. Such a program provides annual, renewable income for the running of the Academy and creates a baseline of philanthropic support on which new programs can be built.

As a direct result of the appeal, the Academy saw 42 new donors and many renewing donors contributing nearly \$22 000. This is important income for the Academy and we look forward to growing this appeal in 2017 as we continue to engage with our supporters across the Academy and the wider community.

Final pledges for the Enlightening Campaign contributed a further \$51 000 to Academy projects.



## *A gift from Professor David Solomon*

Distinguished scientist Professor David Solomon AC FAA FTSE FRS made a generous commitment this year to support the Academy's 2017 national speaker series, 'Plastic Fantastic'.

The Academy's annual speaker series is part of our national engagement program designed to bring science to a broader audience with the aim of being entertaining and highly informative.

Plastic Fantastic will explore how polymers have shaped and continue to shape our lives. Talks will be held in Sydney, Melbourne, Adelaide, Wollongong and Brisbane. More information will be published soon on the Academy website.

The Academy thanks Professor David Solomon for supporting this valuable public outreach initiative.



*Right: Professor David Solomon holding the \$7 banknote produced as a trial using gold film as a security device*

## New partnership with University of Melbourne for women in science

When microbiologist Professor Nancy Millis passed away in September 2012, some of her colleagues at the University of Melbourne came up with the idea that, by donating sufficient funds, they would enable a medal to be struck in her honour—and thus began the Nancy Millis Medal for Women in Science.

Major support from the University of Melbourne to act as a partner in underpinning the award of the Nancy Millis Medal in perpetuity was announced earlier this year. The university's donation will allow the Academy and the university to work together in fully celebrating each recipient of the medal through joint recognition by both organisations.

## The new Max Day Fellowship

A major donation from the longest serving Fellow of the Academy, Dr Maxwell Day AO FAA, is being used to establish the annual Max Day Environmental Science Fellowship Award of up to \$20 000, which will help PhD students or early-career researchers meet costs associated with their research or to supplement PhD scholarships.

We sincerely thank Dr Day for his generosity. A special thank you to Doug Hooley for his generous support to the Max Day Environmental Science Fellowship Award. Mr Dooley has pledged his ongoing support of the award.

## Primary Connections

### Primary Connections Funded Projects

Eighty-one future teachers of science attended a Primary Connections-Ready pre-service teacher workshop at the



Academy President Professor Andrew Holmes, immediate past president Professor Suzanne Cory, and Deputy Vice-Chancellor (Research) University of Melbourne, Professor Jim McCluskey at the Nancy Millis Medal for Women in Science partnership launch at the university.



Teachers exploring Primary Connections resources

University of Tasmania in Launceston in September. To help distance students with the cost of travel, eight bursary grants up to \$400 were awarded thanks to the generous donations given to Primary Connections via the Enlightening Campaign.

The bursary recipients expressed that their goal for attending the two-day event was to improve their confidence in teaching science. More than half of the 81 attendees expressed a below-50% confidence rate in their ability to teach science prior to the workshop. Vanessa Shaw, who travelled

from Hobart thanks to the bursary, said, 'This professional learning experience has been the most valuable PD I have attended during my university study, and has immensely improved my confidence to teach science. Thank you!' Kylie Kidd, a bursary recipient from Melbourne, said she gained the confidence to actively approach her school and volunteer to teach the science unit during her placement as a result of attending the workshop.

According to Stephanie Cummings, also a bursary recipient,



'I came to this PD with a real desire to increase my self-efficacy regarding science teaching. I am passionate about education and it was concerning me that I felt quite anxious teaching and planning for science, particularly in years 5 and 6. This PD has greatly increased my confidence and beliefs that I can do this well. Thank you so much for investing in me as an individual. I hope that I am an advocate for change in schools and for the full implementation of the Australian Curriculum.

'Every aspect of the time was incredibly beneficial and I feel so much more confident about implementing science in the classroom in a way that will challenge, extend, enthuse and interest student curiosity. The facilitators, Rachel and Nicola, were incredibly knowledgeable and professional as well as warm, friendly and encouraging. The two days went so quickly and I valued every minute of it.

'Thank you for the generosity in making a bursary available. I would have been unable to attend without this assistance and I am so grateful for it.'

### **Enlightening funded projects**

Alongside this, eight Enlightening funded workshops have been held for 227 regional and remote in-service teachers this year thanks to the donations. On behalf of these bursary recipients and the team at Primary Connections we would like to thank all the donors for allowing us to be able to upskill these teachers. Your generosity has already had a significant impact on not only the teachers, but also their students.

### **Bequest update**

A bequest is a special gift; a wonderful opportunity to ensure that the Academy remains a part of the lives of future generations.



*Professor David Craig's bequest supported Primary Connections*

Professor David Craig's bequest of \$50 000 which, at his request was directed to Primary Connections, will directly support the publication of four new Student Science Journals for Year 5 students to be published in January 2017.

These journals support each curriculum unit and allow students to record all their work for a unit, lesson by lesson. The journals become a valuable record for both students and teachers and are a key component of the inquiry-based teaching and learning model which underpins Primary Connections.

For a confidential discussion about naming the Academy in your will, please contact the Bequests Manager:

Isobel Griffin MFIA  
 Australian Academy of Science  
 GPO Box 783, Canberra ACT 2601  
 Telephone 02 6201 9400  
 email isobel.griffin@science.org.au

### **Supporting the work of National Committees**

The Academy thanks the following organisations who support the valuable work of the Academy's National Committees.

#### **Mike Smith Student Prize**

The National Museum of Australia (NMA) and the National Committee for History and Philosophy of Science awards the biennial Mike Smith Student Prize for the History of Australian Science or Australian Environmental

History. The NMA provides \$6000 towards this activity: \$3000 for first prize and the remaining towards a presentation ceremony and discretionary runner-up prizes.

The award is presented for an essay based on original research in the fields of environmental history or the history of science in Australia. The NMA and the Academy have awarded the prize since 2006, with the aim of nurturing young scholars and encouraging them to publish their research. In 2013 the prize was re-named after Australian archaeologist and NMA Senior Research Fellow Mike Smith in recognition of his contribution to mentoring young researchers.

### **Contributions from Australian societies and organisations to union subscriptions**

For Australia to contribute internationally, it is essential that memberships to international unions of the International Council for Science (ICSU) are maintained.

Various Australian societies and organisations contribute towards Australia's annual subscriptions. In doing so, the Academy forms a partnership with the societies and other organisations via the relevant National Committee for Science.

The following bodies contribute 50% of related union dues:

- Australian Institute of Physics— towards the International Union for Pure and Applied Physics

- Royal Australian Chemical Institute—towards the International Union for Pure and Applied Chemistry
- Australian Mathematical Science Institute—towards the International Mathematical Union
- Geoscience Australia—towards the International Union for Geological Sciences
- Australian Antarctic Division—towards the Scientific Committee for Antarctic Research.

### Funding of decadal and strategic plans

Decadal plans are 10-year strategic plans for science disciplines. The purpose of a plan is to assess the current state of knowledge in a specific science discipline, identify and set priorities for the most important scientific questions for the next decade, and outline strategies to achieve these priorities and goals. The diversity of each discipline makes the production of decadal plans exciting and unique projects. Decadal plans are produced by the research community, but the audiences for the documents are, to a large extent, policy makers and funding bodies.

The production of the plans is undertaken by the National Committees for Science with funding from government, industry and the research sector. Many professional bodies, universities and research organisations have financially contributed to the development of plans, without which the projects would be unfeasible. These organisations also contribute in-kind support and provide essential intellectual input.

The many organisations that support the production of these documents are listed on the plans' websites and within the individual publications.

More information on decadal and strategic plans: [www.science.org.au/support/analysis/decadal-plans-science](http://www.science.org.au/support/analysis/decadal-plans-science)

### Nova a favourite for curious minds

[nova.org.au](http://nova.org.au)

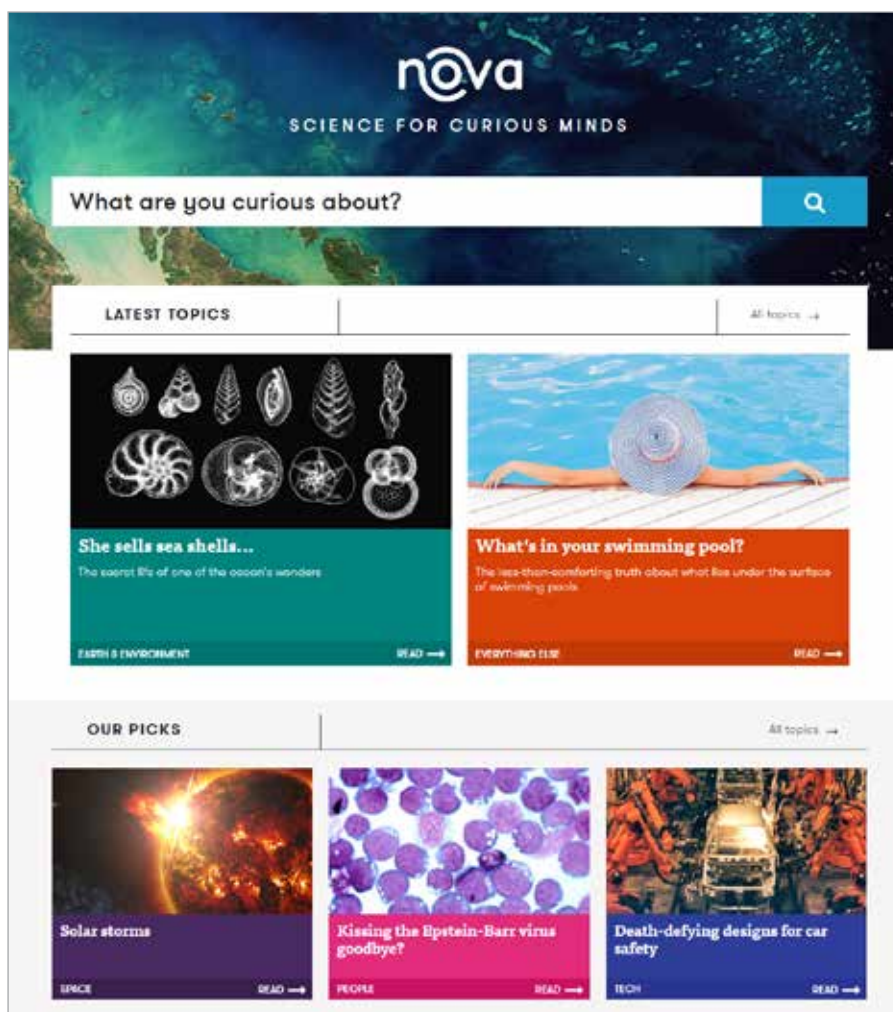
The Academy is very grateful for Telstra's generous donation for 'Nova: science for curious minds'—\$1 million over three years—which enabled the Academy to redesign and rebuild its science explainer website and employ a small and committed team to research and create topical and authoritative content.

Nova supports STEM literacy and attracts a broad audience through the website, social media and collaborations with other science communication providers. In recent times, the Australian Government and supporting science communication programs have

reinforced the need for increased awareness and appreciation of science in Australia. Nova has an integral and growing part to play in building public knowledge and supporting scientific exploration and innovation.

The success of the first 18 months of the new Nova website is supported by the following data:

- 200 000 visitors to the site, more than 10% of who return to the site within a month
- 300 000 visits to the site
- nearly 2000 email subscribers, 1600 Facebook fans, and 700 Twitter followers
- 92 long-form topics reviewed by 165 experts
- Nearly 10 million total views on YouTube of 3 animated videos scripted and sponsored by Nova and created and published by German animators Kurzgesagt.



Nova's external collaborations so far include Kurzgesagt, Apple, CSIRO's Double Helix magazine, the Qld Brain Institute, Swinburne University and the ANU's Centre for the Public Awareness of Science. Nova is also working to give the achievements of the Academy more broadly an accessible public focus.

Nova was shortlisted in the top five for an Australian Graphic Design Association award in November 2015.

## Support for early- and mid-career researchers

### Future leaders meet in Sydney

The Early- and Mid-Career Researcher (EMCR) Forum is the national voice of Australia's emerging scientists and is supported by the Academy. The EMCR Forum holds a national meeting, Science Pathways, every 18 months to engage EMCRs across all disciplines and from around Australia in active discussion. The event also offers professional development opportunities for EMCRs. This year the topic was 'Future Leaders'. Feedback from delegates demonstrated how much benefit young scientists received from attending the conference.

*'It is exciting to think how this group may be able to drive change within the scientific community... just the real sense of excitement and energy about the whole thing.'*

SCIENCE PATHWAYS 2016 DELEGATE

'[Benefits were] listening to the success stories of EMCRs to inspire me as well as getting tips on how to present oneself as a good leader.'

'I better understand how to be a leader and manager and what to look for in other leaders and managers.'

'[Benefits were] the inspiration I got from the sessions shared during the sessions and the networking—we can improve the system.'

The EMCR Forum thanks the sponsors who made the event possible.

The University of Canberra offered generous sponsorship for carer grants, which were available for the first time this year. The grants enabled eight EMCRs with caring responsibilities to meet their responsibilities while at the conference. Some used the funds to pay for additional child care, while others brought children and carers along to the conference with them.

'I would like to express my sincere appreciation to the University of Canberra for their generous support to make my trip possible. Without their financial support, I couldn't attend such an informative conference which will play an important role in my career development.'

The University of Newcastle sponsored the networking event, giving delegates the chance to meet new people and form collaborations while bonding over an activity which asked them to demonstrate examples of poor leadership.

UNSW Australia generously provided the venue and catering.

The EMCR Forum also thanks the following sponsors for their generous support:

- Department of State Development, South Australia
- Office of the Chief Scientist and Engineer, NSW Department of Industry
- RMIT University
- Monash University
- Hunter Medical Research Institute
- ARC Centre of Excellence for Climate System Science

- QIMR Berghofer Medical Research Institute
- Jirra Wines
- CSL Ltd
- ARC Centre of Excellence for Electromaterials Science
- CSIRO
- University of Western Australian
- University of Queensland
- University of South Australia
- Telethon Kids Institute.

### EMCRs explore the frontiers of microbiome research

The 2016 Theo Murphy Australian Frontiers of Science symposium brought 70 outstanding EMCRs from around the country to Adelaide to discuss the impact of microbes on us and the world around us. The symposium, entitled 'The Microbiome: Exploring the role of microorganisms in health and ecosystem processes', was an interdisciplinary conference which provided delegates with the opportunity to meet and form collaborations with colleagues that they may not normally encounter.

The delegates were taken on a journey from Antarctica to coral reefs and back again, from the intestine to the skin in humans and animals, and back in time to look at the diet of the Neanderthals. They shared insights on the tools they have in common, exchanged tips for career success, discussed gender equity and explored how EMCRs can support each other in this part of their research journey.

There was great enthusiasm from all delegates to stay connected and continue to find ways to work together. The symposium was generously funded by the Theo Murphy (Australia) Fund through the Royal Society of London. This funding facilitated the attendance of all delegates, effectively removing barriers to attendance such as cost,



geography and caring responsibilities, and created an inclusive event.

### 180 Seconds of Science

In 180 seconds, EMCRs were invited to showcase their innovative research to the public. The EMCR Forum and the Royal Society of New Zealand Early Career Forum worked together to run this video competition in Australia and New Zealand. The videos make scientific topics as diverse as volcanos, flexible solar cells and the behavioural effects

of violent video games accessible to everyone.

The EMCR Forum thanks its award partners who enabled it to provide EMCRs with a platform to communicate their science and win great prizes:

- CSIRO SME Connect
- CSL Ltd
- New Zealand Ministry of Business, Innovation and Employment
- Garvan Institute of Medial Research
- John Morris Group.

### Event sponsors

The Academy would like to thank the following sponsors for their valuable and generous support of its events.

#### Canberra public speaker series, Bots, Bacteria and Booze

- Jirra Wines at Jeir Station
- The Edge Catering

Their ongoing support for the series ensured the Academy could bring



Participants in the Frontiers of Science symposium in Adelaide



Dr Helen Taylor won the NZ section of 180 Seconds of Science with her video 'Studs or duds? Bird sperm and conservation'.



*Professor Kieran Kirk, one of the presenters in the popular 'Bots, Bacteria and Booze' series of public talks*

quality speakers to Canberra for our talks. We look forward to working with them again on the 2017 public speaker series, 'Dawn of the New Space Age'.

### **Science at the Shine Dome 2017**

- CSIRO
- Department of Industry, Innovation and Science
- The Centre of Excellence for Biosecurity Risk Analysis (CEBRA)
- National Computational Infrastructure (NCI)
- ANU College of Medicine, Biology and Environment / ANU College of Physical and Mathematical Sciences
- Centre of Excellence for Environmental Decisions (CEED)

### **LIFE in Perth**

- Inspiring Australia WA / SciTech
- The University of Western Australia

### **Donor Board update**

The Academy thanks the following individuals who join a distinguished list of donors who have, over time, contributed an outstanding level of support to the Academy. These listings will appear on the donor boards located

in the foyer of the Shine Dome at the Academy in Canberra.

President's Circle acknowledges donations of or valued at \$100 000–\$499 999

- Dr Maxwell Frank Cooper Day AO FAA
- The Late Professor Rod Rickards FAA and Dr Anna Rickards
- Professor Terry Speed FAA FRS and Ms FE (Sally) Speed

Science Circle acknowledges donations of or valued at \$20 000 – \$99 999

- Dr Eldon Ball
- Professor Marilyn Ball FAA
- Mr Doug Hooley PSM
- Professor David Solomon AC FAA FRS FTSE

### **Donor roll of honour**

All donations will be acknowledged for a period of 12 months. This list will be updated quarterly. Last updated 30 September 2016.

### **Academy Pillars**

(Donations of or valued at \$500 000 +)

#### **In perpetuity**

- Sir Jack Ellerton Becker FAA
- Estate of Thomas Lewis Davis

- Department of Communications, Information Technology and the Arts
- FJ Fenner AC CMG MBE FAA FRS and Mrs Bobbie Fenner
- Dr Margaret Middleton
- The Royal Society (UK)—Theo Murphy (Australia) Fund
- Estate of Ian Gordon Ross AO FAA
- Estate of Miss JG Russell
- Professor John Shine AO FAA
- Telstra

The Australian Academy of Science acknowledges the support of donors who have given generously in 2015. Their support plays a critical role in helping the Academy achieve its mission.

### **President's Circle**

(Donations of or valued at \$100 000–\$499 999)

- Dr Maxwell Day AO FAA
- The University of Melbourne

### **Science Circle**

(Donations of or valued at \$20 000–\$99 999)

- Professor Jan Anderson FAA FRS
- Mr Doug Hooley PSM
- Professor Paul Korner AO FAA
- Dr Margaret R Middleton
- Professor David Solomon AC FAA FRS FTSE

### **Academy Supporters**

(Donations of or valued at \$10 000–\$19 999)

- Dr Jennifer Gordon
- Dr TJ Higgins FAA FTSE and Dr Peggy Horn
- Dr Anna Rickards
- Selby Scientific Foundation
- Anonymous (1)

### **Friends of the Academy**

(Donations of or valued at \$5000–\$9999)

- Dr Eldon Ball
- Professor Marilyn Ball FAA

- Professor Sir Gustav Nossal AC CBE FAA FRS FTSE and Lady Lyn Nossal

### **Academy Associates**

(Donations of or valued at \$1000–\$4999)

- Professor Brian Anderson AC FAA FRS
- Professor Michael Barber FAA FTSE
- Professor Suzanne Cory AC FAA FRS
- Dr Rana Munns FAA
- Dr John Church FAA FTSE
- Professor Brian Kay AM FAA
- Professor Fred Mendelsohn AO FAA
- Professor Nicos A Nicola FAA
- Dr Ezio Rizzardo FAA FRS FTSE
- Dr Colin Ward FAA FAIAS FTSE

### **Donors \$500–\$999**

- Professor Martin A Bennett FAA FRS
- Professor David Green AM FAA FRS
- Emeritus Professor Bruce Holloway AO FAA FTSE
- Professor Andrew Holmes AM PresAA FRS FTSE
- Professor David Letham FAA
- Professor John Oswald Newton FAA
- Mrs Cheryl Sutherland
- Professor Ole Warnaar FAA

### **Donors up to \$499**

- Mr Jamie Alonso
- Professor Michael Alpers AO FAA
- Dr Cyril Appleby FAA
- Desi Ariwinanti
- Mrs Kaye Beckwith
- Dr Keith Boardman AO FAA FRS FTSE
- Ms Susannah Bourke

- Professor Henry Burger AO FAA FRACP
- Professor Choo FAA
- Professor Andrew Regina Cole FAA
- Ms Penny Collings
- Mr Anton Cook
- Professor David Doddrell AM FAA
- Ms Tracy Emm
- Professor Matthew Colless FAA
- Ms Karen Gair
- Mr David Glagovs
- Ms Chantel Grellman
- Ms Isobel Griffin
- Ms Dianne Hodge
- Mrs Janice Johnson
- Professor Allen Kerr AO FAA FRS
- Emeritus Professor Jim Lance AO CBE FAA
- Adina Leu
- Dr Alexander McClintock
- Professor Ian McDougall FAA
- Professor Bruce McKellar FAA
- Dr Sue Meek AO FTSE
- Sir Rupert Myers AO KBE FAA FTSE
- Ms Elle Nish
- Ms Kathy O'Neil

- Richard Parker
- Professor Mervyn Paterson FAA
- Mr Ben Patterson
- Professor David Pegg FAA
- Professor Harry Poulos AM FAA FTSE
- Professor Cheryl Praeger AM FAA
- Dr Richard Richards FAA
- Ms Margaret Robinson
- Mrs K M Rodda
- Yunru Sung
- Ms Helen Swift
- Professor Gerry Wake FAA
- Professor Robin Warren AC FAA Nobel Laureate
- Dr Guy White AM FAA
- Professor John White AO CMG FAA FRS
- Mrs D Alleyne Womersley
- Dr John Zillman AO FAA FTSE
- Anonymous (1)

---

NOTE: Every effort has been made to ensure the accuracy of this report. We sincerely apologise if any error or omission has occurred. If you notice an error or omission please notify the Australian Academy of Science on 02 6201 9471.

## *Making a donation*

The Australian Academy of Science is registered as a Deductible Gift Recipient (DGR): your donation to the Academy is fully tax-deductible.

To make a gift to the Academy please visit [www.science.org.au/support-us](http://www.science.org.au/support-us), or for more information about giving to the Academy

through a donation or bequest, please contact:

**Ms Isobel Griffin MFIA**  
Manager

Development and Stewardship  
[isobel.griffin@science.org.au](mailto:isobel.griffin@science.org.au)  
Phone: 02 6201 9471