# JUNE 2019 NEWSLETTER NUMBER 128

## Message from the Chief Executive—June 2019 June 26, 2019

Over the past month, we have celebrated scientific excellence at all levels and in all its forms—from our Fellows who received Queen's Birthday honours¹ to EMCR grant recipients² and the 84 primary school students and their teachers who participated in Science at the Shine Dome Junior³.

All these recognitions remind us how much scientists and science contribute to the betterment of Australia in a variety of ways.

Aside from our work in Australia. the Academy is involved in a range of activities internationally. We are proud to be able to build capacity in our region so that scientists who have less resources than those available in Australia are able to contribute to knowledge creation and to use it to advance their nations. Recently, the Academy sponsored two early-career researchers from South-East Asia<sup>4</sup>, providing an opportunity for them to meet and collaborate with Fellows of the Academy and other early- and mid-career researchers.

Do you wish to take the Falling Walls challenge? Are you an innovator or entrepreneur willing to give a three-minute presentation on your research, business model or initiative? **Read more about it**<sup>5</sup> and don't miss the deadline for application on 11 July.

Finally, the Academy has opened its Fellowship nominations for 2020. Each year the Academy elects up to 24 new Fellows. Only our Fellows can nominate candidates for election. Information on eligibility and the nomination process can be found on the Academy website<sup>6</sup>. Nominations are due by 31 July 2019.

In this newsletter, you will also find information on other exciting opportunities for scientists<sup>7</sup>.

Anna-Maria Arabia

#### Queen's Birthday honours for seven Academy Fellows June 09, 2019

Seven Academy Fellows have been recognised in this year's Queen's Birthday honours list, including three who have received Australia's highest accolade for their work, named as Companions in the General Division of the Order of Australia.



- 1 https://www.science.org.au/news-and-events/news-and-media-releases/queens-birthday-honours-seven-academy-fellows-2019
- 2 https://www.science.org.au/news-and-events/news-and-media-releases/recipients-emcr-mobility-grants-france-and-europe-announced
- https://www.science.org.au/academy-newsletter/june-2019-128/academy-hosts-inaugural-science-shine-dome-junior
- 4 https://www.science.org.au/academy-newsletter/june-2019-128/academy-sponsors-international-emcrs-science-shine-dome
- $5 \qquad \text{https://www.science.org.au/opportunities/travel/grants-and-exchange/falling-walls-lab-australia} \\$
- 6 https://www.science.org.au/fellowship/election-academy
- 7 https://www.science.org.au/academy-newsletter/june-2019-128/opportunities-scientists

Professor David Burke AC FAA FTSE has been named a Companion for his eminent service to neurophysiology, to innovative treatments for spinal cord and brain trauma injuries, and to professional medical organisations.

Professor Alan Cowman AC FAA FRS has been honoured for his eminent service to the biological sciences, notably to molecular parasitology, to medical research and scientific education, and as a mentor.

Emeritus Professor Leo Radom AC FAA has been recognised for his eminent service to science, particularly to computational chemistry, as an academic, author and mentor, and to international scientific bodies.

Four Academy Fellows have also been recognised as Officers in the General Division of the Order of Australia.

Professor Linda Richards AO FAA has been recognised for her distinguished service to medical research and education in the field of developmental neurobiology, and to community engagement in science.

Professor Frances Separovic AO FAA has been awarded for her distinguished service to science education, particularly to biophysical chemistry, as an academic, and to young women in science.

Professor Michelle Simmons AO FAA FRS FTSE has been acknowledged for her distinguished service to science education as a leader in quantum and atomic electronics, and as a role model.

Professor Mark von Itzstein AO FAA has been recognised for his distinguished service to medical research and education in the field of structural biology and glycochemistry, and as a mentor.

#### Recipients of EMCR mobility grants for France and Europe announced June 18, 2019

The Academy has announced the recipients of the France and Europe early- and mid-career (EMCR) mobility grants for 2019, who have been awarded a share of the total \$71,785 in funding. These grants are intended to strengthen international research networks, providing support of up to \$5000 for Australian researchers to travel to France and Europe and work with leading researchers at major science and technology organisations for a period of between 14 and 28 days.

The Rod Rickards Fellowship, which supports researchers to travel to Europe for collaborative research in chemistry or biology, has been awarded to 11 Australian earlyand mid-career researchers. The recipients are:

- Dr Jessica Allen, University of Newcastle
- Dr Ryan Burrows, Griffith University
- Dr Xiaoying Cui, University of Oueensland
- Dr Tim Gould, Griffith University
- Dr Meiling Han, Monash University
- Dr Clarissa House, Western Sydney University
- Dr Jennifer Macleod, Queensland University of Technology



- Associate Professor Alister Page, University of Newcastle
- Dr Onisha Patel, Walter and Eliza Hall Institute of Medical Research
- Dr Mohammad Pourkheirandish, University of Melbourne
- Dr Christian Rinke, Australian Centre for Ecogenomics.

Additionally, four Bede Morris Memorial Fund grants have been awarded to support researchers to travel to France for research in any field of natural sciences. The 2019 recipients of the Bede Morris grants are:

- Professor Igor Aharonovich, UTS
- Dr Kirill Glavatskiy, University of Sydney
- Dr Margaux Le Vaillant, CSIRO
- Dr Peta Neale, Griffith University.

These mobility grants are possible due to the generous support of the Rod Morris and Bede Morris memorial funds respectively, which continue the legacy of two outstanding scientists, Professor Bede Morris FAA (1927–1988) and Professor Rod Rickards FAA (1934–2007).

More information on the France and Europe EMCR Mobility Grants<sup>8</sup>

## Academy welcomes new leaders for communication and diversity

June 17, 2019

The Australian Academy of Science welcomes Louise Moes to the role of Manager Diversity and Inclusion, and the appointment



of Paul Richards as Director Communications and Outreach.

Louise Moes brings significant experience having developed diversity and social inclusion strategies, policy and solutions across not for profit, government and education sectors in Australia and the UK. Louise has undertaken work in relation to Indigenous and gender national policy, health and domestic and family violence and has led strategies focusing on economic development, education and the future of work.

Academy Chief Executive Anna-Maria Arabia said Louise has a strong track record of effecting change at a national level and has much experience in engaging with a wide range of stakeholders.

"Louise will play a key leadership role as the Academy aims to be a national leader in diversity and inclusion in the science sector," Anna-Maria Arabia said.

Paul Richards steps into his new role from July, having previously managed the Academy's digital strategy and video production



capability. He replaces Dr Melanie Bagg who will commence as CEO of the National Youth Science Forum.

Paul joined the Academy two years ago after a 17-year journalism career including 10 years at Channel Seven's Sunrise program, which remained Australia's number one breakfast TV program while Paul was in the role.

Ms Arabia said Paul has played an integral role in the success of the Academy's communications and outreach initiatives since joining the organisation.

"Our online audience has exploded in the past two years from 9000 followers on Facebook to over 1.5 million. Paul has seamlessly meshed his deep experience in journalism with scientific excellence and will lead further growth of the Academy's outreach activities.

"The Academy extends its gratitude to Melanie Bagg for her outstanding contribution and wishes her every success in her next chapter," Anna-Maria Arabia concluded.

 $<sup>8 \</sup>quad \text{https://www.science.org.au/opportunities/travel/grants-and-exchange/france-and-europe-emcr-mobility-grants} \\$ 



Professor Jenny Graves (right) visits the Chilean Academy of Sciences, with the President of the Academy, Cecilia Hidalgo (middle).

# SERVATÓRIO DO AMANHÃ É APRESENTADO PELA SHELL AOUI E.L MULHERES NA CIÊNCIA NO BRASIL E NA AUSTRÁŁIA

Professor Graves presents at a panel on Women in Science at the Museum of Tomorrow, Rio de Janeiro, Brazil.

#### Academy Fellow's visit to Latin America strengthens ties

June 26, 2019

Academy Fellow Professor Jenny Graves travelled to Argentina, Brazil, Colombia and Mexico in May, with the support of the Academy and a grant from the Australian Government Council on Australia Latin America Relations (COALAR).

During the trip, Professor Graves delivered a series of lectures on her uniquely Australian genomic research, highlighted Australia as a place to conduct high-level research, raised awareness of the Science in Australia Gender Equity (SAGE) initiative and the Women in STEM Decadal Plan, and discussed the Academy's science education programs and the importance of supporting early-career researchers.

Her speaking engagements includined plenary speaker at the annual meeting of the Colombian Academy of Sciences in Bogotá, and participation on a Women in

Science panel at the Museum of Tomorrow in Rio de Janeiro, Brazil, jointly hosted by the Australian Embassy and Brazilian Academy of Sciences.

She also met with the Vice Minister for Science, Carolina Torrealba, in Santiago, Chile, who has since decided to set up a working group on women in STEM in Chile. In Mexico City, Mexico, she met with the new Minister for Science, Dr Elena Alvarez-Buylla.

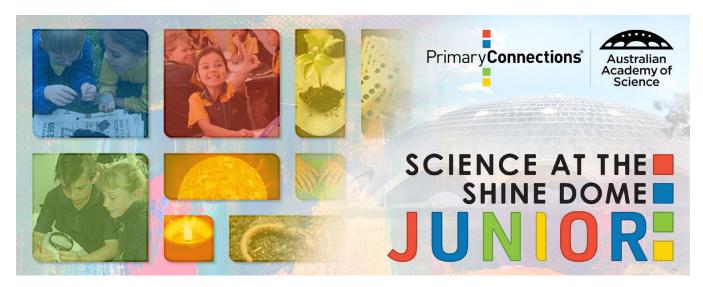
The Academy acknowledges the support of the Australian Embassies in Latin America for making this visit a success.



Australian Ambassador to Chile, Rob Fergusson, Vice Minister for Science, Carolina Torrealba, and Professor Graves.



Australian Ambassador David Engel, Science Minister of Mexico, Elena Alvarez-Buylla, and Professor Graves.



#### Academy hosts inaugural Science at the Shine **Dome Junior**

June 26, 2019

One week after the success of Science at the Shine Dome<sup>9</sup>, the Academy's Primary Connections education program hosted the inaugural Science at the Shine Dome Junior on 5 June.

This event brought together 84 Year 2 students and their teachers from 10 schools across the Canberra-Queanbeyan region for a day of inquiry-based science learning.

Students were guided through the initial stages of a hands-on inquiry including consideration of a design challenge, science and mathematics concepts.

While students explored and devised solutions, their teachers experienced the **Primary** Connections approach 10 and observed strategies that support science, technology, engineering and mathematics (STEM) learning in the classroom.



Year 2 students attending the inaugural Science at the Shine Dome Junior.

The event concluded with a tour of the iconic Shine Dome. Both teachers and students left with a suite of resources to inspire them in STEM.

https://www.science.org.au/news-and-events/news-and-media-releases/academy-celebrates-great-australian-science-shine-dome

<sup>10</sup> https://www.science.org.au/education/academy-education/primary-connections

#### EMCR experience enhanced by expanded program at Science at the Shine Dome 2019 June 25, 2019

The Academy's flagship event, Science at the Shine Dome, attracted more than 70 early- and mid-career researchers (EMCRs) from across Australia in 2019. Attendees participated in a program designed to facilitate networking and professional development opportunities.

Dr Sarina Kilham, a rural sociologist from Charles Sturt University, described the three-day event as 'enjoyable and worthwhile'.

'As a transdisciplinary researcher, I sit with one foot in the science sector and one foot in the social sciences,' she said. 'I was unsure how the Academy would be relevant to me and my research interests, but the whole three days was a wonderful blur of networking and inspiring conversations with both EMCRs and senior researchers.'

Dr Kilham was particularly inspired by the recipients of the **inaugural Aboriginal and Torres Strait Islander Scientist Travelling Research Awards**<sup>11</sup>.

'The most significant and valuable part was seeing the Indigenous researchers receive their grants,' she said. 'There was a call-out to support more Indigenous scientists, and for better inclusion and diversity generally.'

In addition to all the usual Science at the Shine Dome presentations and functions, this year featured an expanded EMCR program thanks to the support of EMCR Presenting Partner, UniBank.

Functions specifically for EMCRs included a masterclass focusing on wellbeing and work-life balance and a networking dinner on Tuesday 28 May. Four workshops covering grant writing, leadership, industry engagement, and CV writing and

interview skills development were held on Thursday 30 May.

The Academy acknowledges and is grateful for the ongoing support of UniBank.

## **Uni3ank**



EMCRs attend a workshop during Science at the Shine Dome 2019.



EMCR attendees could choose from one of four professional development workshops at Science at the Shine Dome 2019.

<sup>11</sup> https://www.science.org.au/news-and-events/news-and-media-releases/emerging-aboriginal-and-torres-strait-islander-scientists



Dr Mohd Sukor Su'ait and Professor Hadiyanto with Professor Elaine Sadler, Foreign Secretary of the Academy.

#### Academy sponsors international EMCRs at Science at the Shine Dome June 26, 2019

Two international early- and midcareer researchers (EMCRs) from South-East Asia attended Science at the Shine Dome 2019, thanks to sponsorship from the Academy.

Dr Mohd Sukor Su'ait, a Research Fellow at Solar Energy Research Institute (SERI), Universiti Kebangsaan Malaysia (UKM), and Professor Hadiyanto, from the Chemical Engineering Department, Diponegoro University, Indonesia, travelled to Canberra to meet and network with Fellows and other EMCRs.

They also visited the ANU Energy Change Institute at the Australian National University, hosted by Professor Kylie Catchpole from the College of Engineering and Computer Science.

Both Dr Su'ait and Professor Hadiyanto said they benefited personally and professionally from attending the Academy's flagship event.



Dr Su'ait said that as a scientist involved in renewable resources and energy materials, he was inspired by Fellows of the Academy and their scientific journey. This has motivated him to pursue academic excellence not only in academia but also in industry, and contribute to the national development of Malavsia.

Professor Hadiyanto said that attendance at this event was of great value and gave him a broad view of research activities in Australia in the area of renewable energy. Professor Hadiyanto had discussions with researchers about potential research collaborations.

More information about Science at the Shine Dome 2019<sup>12</sup>

#### Join Future Earth Australia to discuss 'The future of coasts'

June 26, 2019

Future Earth Australia, a program of the Academy, is hosting its first 2019 event for early-career researchers and practitioners, titled 'The future of coasts'.

The two-day forum and workshop, hosted by Future Earth Australia 13 and the Australian Climate Change Adaptation Research Network for

Settlements and Infrastructure together with Climate-KIC, will be held on the Gold Coast on Monday 19 August and Tuesday 20 August.

Due to the event's proximity to the 7th Oueensland Coastal Conference 14, this event will also focus on the coastal environment and the challenges we collectively face in shaping, managing and conserving the coast.

This event will provide a unique opportunity for those conducting research or practising in engineering, science, urban planning, the built environment, social sciences, economics and business to meet fellow researchers and practitioners from other Australian institutions and facilities.

A maximum of 20 applicants will be selected to participate, to ensure that each participant has the chance to listen to and speak with all the other participants and build lasting connections within the coastal field.

Participation is open to early-career researchers, practitioners in industry or government, and students (honours, masters or PhD) with an interest in coasts.

More information about 'The future of coasts' 15

<sup>12</sup> https://www.science.org.au/news-and-events/news-and-media-releases/academy-celebrates-great-australian-science-shine-dome

<sup>13</sup> https://www.science.org.au/supporting-science/future-earth-australia

<sup>14</sup> https://www.qcc2019.org/

<sup>15</sup> https://www.science.org.au/supporting-science/future-earth-australia/events/future-coasts-early-career-researcher-and

#### Academy hosts meeting to develop national FAIR data strategy

June 26, 2019

In June, the Academy partnered with the Australian Research Data Commons (ARDC) to host Dr Simon Hodson, executive director of the Committee for Data (CODATA) of the International Science Council.

Dr Hodson spent three days in Canberra discussing CODATA's global initiatives to make research data FAIR—findable, assessable, interoperable and reusable—with members of Australia's wider research community, funding agencies and publishers.

The Academy hosted a roundtable meeting to develop a national strategy to address FAIR data principles with representatives from the academies for technology and engineering, health and medical sciences, social sciences and the humanities.

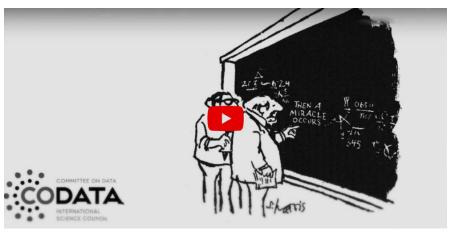
Dr Hodson also delivered a public lecture on the CODATA initiatives using data to solve the big problems in resilient cities, disaster risk reduction and infectious diseases.

The Academy is the Australian member of CODATA and facilities involvement through the National Committee for Data in Science.

Find out more about CODATA 16



Watch 'FAIR data' Curious video: https://youtu.be/ta-fpC8zHxo



Watch 'Data for the Planet - a public lecture' on YouTube: https://youtu.be/Uorl7DzzMFg

#### Changing lives with virtual reality, artificial intelligence and robots

June 27, 2019

By 2020, it is estimated that 200 million virtual reality (VR) headsets will have been sold worldwide.

This was just one staggering statistic presented during an evening of surprising stories told by researchers Dr Naseem Ahmadpour and Distinguished Professor Mary-Anne Williams.

The event, held on 18 June at the Shine Dome, was part of the Academy's Changing Lives with Science speaker series.

Professor Williams, a social roboticist and founder of the Magic Lab at the University of Technology Sydney, traced the rise of artificial intelligence (AI) in her talk. She discussed the risks and opportunities of this emerging tech, and outlined four strategies for dealing with AI into the future.

Dr Ahmadpour researches design for health and wellbeing, and her recent work has focused on VR. She explored several exciting applications of VR, including helping children with needle phobias and improving motivation for physical activity.

Catch up on previous events by checking out the #ScienceChangingLives hashtag on Twitter. 17

Don't miss the next evening of science storytelling on 13 August 2019, Sounds through science:

<sup>16</sup> http://www.codata.org/

<sup>17</sup> https://twitter.com/hashtag/ScienceChangingLives



Watch 'Changing lives with science - speaker series' Curious video: https://youtu.be/7XHG9GCLUr4



Distinguished Professor Mary-Anne Williams, a social roboticist. Image: BE Sydney.

cochlear implants. 18 We will hear from Professor Graeme Clark AC, the inventor of the cochlear implant, and Professor Jennie Brand-Miller, an internationally renowned scientist whose life was transformed by cochlear technology.

The Academy is grateful for the support of the University of Canberra, our Exclusive Presenting Partner.

More information about Changing Lives with Science 19

#### A 'hypothetical' on climate change: the science and the law

A panel of experts on the science and the law relating to climate change will be asked questions by Justin Gleeson sc of the New South Wales Bar on this important topic.

#### **The Panel**

- Professor Lesley Hughes, Pro Vice-Chancellor (Research), Macquarie University
- Professor David Karoly FAA, Leader of the NESP Earth Systems and Climate Change Hub, based in CSIRO

· Professor Rosemary Lyster, Professor of Climate and Environmental Law, University of Sydney Law School

- Professor Jacqueline Peel, Professor of Law, University of Melbourne Law School
- Professor Will Steffen. Emeritus Professor, Australian National University
- Professor Erika Techera, Professor of Environmental Law, University of Western Australia Law School

#### **Event details**

Date: 5:00pm, Thursday, 22 August 2019

Venue: Federal Court – Court No 1, Level 21 Law Courts Building, Queen's Square, Sydney

Cost: Free for Academy Fellows, \$25

for non-fellows

#### Please register by 15 August.

Visit the AAL website<sup>20</sup> or email AALSecretariat@academyoflaw. org.au for more information.

#### Opportunities for scientists June 26, 2019

#### **Academy opportunities**

#### Falling Walls Lab Australia 2019 \*APPLICATIONS CLOSE 11 JULY\*

Inviting applications from researchers living and working in Australia who are postdocs and students, entrepreneurs, engineers and innovators from all areas to attend Australia's Falling Walls Lab in 2019.

Falling Walls Lab Australia will be held on 3 September 2019 at the Academy's Shine Dome, Canberra. Twenty Australian contestants will participate, each giving a three-minute presentation on their research, business model or initiative based on the 'Which walls will fall next?' concept.

Applications close 11 July 2019 More information about Falling Walls Lab Australia 2019<sup>21</sup>

#### **Fellowship nominations**

Each year the Academy elects up to 20 new Fellows by 'Ordinary Election' and up to four additional Fellows by 'Special Election'. Only Academy Fellows can nominate

<sup>18</sup> https://www.science.org.au/news-and-events/events/public-speaker-series/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-science/changing-lives-s

<sup>19</sup> https://www.science.org.au/news-and-events/events/public-speaker-series/changing-lives-science

<sup>20</sup> http://www.academyoflaw.org.au/event-3429043

<sup>21</sup> https://www.science.org.au/opportunities/travel/grants-and-exchange/falling-walls-lab-australia

candidates for election to the Academy and we encourage all our Fellows to nominate diversity candidates.

30 June 2019: Deadline for candidate suggestions; online nomination system opens for Fellows only

31 July 2019: Fellows must have started nominations in the online system

31 August 2019: deadline for nomination submissions

More about Fellowship nominations<sup>22</sup>

#### **External opportunities**

#### Victoria Prize for Science and Innovation

Recognises leadership, determination and creativity, highlighting the many ways in which research and development of international significance are conducted in Victoria—\$50,000

Applications close 17 July 2019 More information on the Victoria Prize for Science and Innovation<sup>23</sup>

#### **Victoria Fellowships**

Recognises the important role of innovation in Victoria's economic future and the need for Victorians to be skilled in science, technology, engineering and mathematics—\$18,000

Applications close 17 July 2019 More information on the Victoria Fellowships<sup>24</sup>

#### 2019 Metcalf Prizes for Stem Cell Research

The National Stem Cell Foundation of Australia awards two exceptional mid-career stem cell researchers with the Metcalf Prizes for Stem Cell Research. The prizes recognise and honour the contribution made to stem cell research by Emeritus Professor Donald Metcalf AC FAA FRS.

Applications close 29 July 2019 More information on the 2019 Metcalf Prizes for Stem Cell Research<sup>25</sup>

#### 2020 Australian of the **Year Awards**

Celebrates the contributions of those leading Australians who excel in their chosen field or who make outstanding achievements for the betterment of others.

Applications close 31 July 2019 More information on the 2020 Australian of the Year Awards<sup>26</sup>

#### Millennium Technology Prize

The Millennium Technology Prize is presented every two years and awarded for a technological breakthrough made anywhere in the world. The innovation shall help to solve the great challenges of humanity while also being environmentally sustainable— €1 million

Applications close 31 July 2019 More information on the Millennium Technology Prize<sup>27</sup>

More external awards and prizes<sup>28</sup>

#### Fellows update

June 26, 2019

#### Honours and awards to Fellows Professor David Burke AC FAA

**FTSE**—Companion in the General Division of the Order of Australia

#### Professor Alan Cowman AC FAA

**FRS**—Companion in the General Division of the Order of Australia

#### **Emeritus Professor Leo Radom AC**

**FAA**— Companion in the General Division of the Order of Australia

#### Professor Linda Richards AO FAA-

Officer in the General Division of the Order of Australia

#### **Professor Frances Separovic AO**

FAA—Officer in the General Division of the Order of Australia

#### **Professor Michelle Simmons AO**

FAA FRS FTSE—Officer in the General Division of the Order of Australia

#### Professor Mark von Itzstein AO

FAA—Officer in the General Division of the Order of Australia

More about the Queen's Birthday honours<sup>29</sup>

<sup>22</sup> https://www.science.org.au/fellowship/election-academy

<sup>23</sup> https://www.veski.org.au/vicprize-criteria

<sup>24</sup> https://www.veski.org.au/vicfellow-criteria

<sup>25</sup> https://www.stemcellfoundation.net.au/metcalf\_prizes

<sup>26</sup> https://www.australianoftheyear.org.au/nominate/

<sup>27</sup> https://taf.fi/millennium-technology-prize/

<sup>28</sup> https://www.science.org.au/opportunities/recognition/external-sources-recognition

<sup>29</sup> https://www.science.org.au/news-and-events/news-and-media-releases/queens-birthday-honours-seven-academy-fellows

#### **Obituaries**

### Dr Robert Donald Bruce Fraser FAA

14 August 1924 to 15 June 2019

Dr Bruce Fraser was a biophysicist internationally recognised for his contributions to our knowledge of the structure of fibrous proteins, particularly of wool and other keratins.

Dr Fraser studied at Kings College, London and was involved in the work that led to the discovery of the molecular structure of DNA. In 1952, Bruce immigrated to Australia from England with his family, to take up a position at CSIRO in Melbourne. He retired as Chief of the Division (1987) to take up a Fogarty Scholarship at the National Institutes of Health in Washington. On returning to Australia for retirement, Dr Fraser continued his work on fibrous protein structure (including studies of goanna claw keratin) and published many papers.

Dr Fraser was elected to the Academy in 1978. He served on the National Committee for Biophysics and on the Sectional Committee for Biology at the Cellular Level. In 1981 Dr Fraser received the Royal Society of Victoria Research Medal and in 2005 he was awarded the World War Two Veterans Medal for his service as a pilot for the Royal Air Force (1943–46).

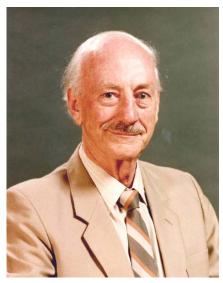
### Professor Joseph Frank Sambrook FAA FRS

1 March 1939 to 14 June 2019

Professor Joseph Sambrook was one of Australia's most distinguished molecular biologists. He made many important contributions to molecular and biochemical genetics, studying animal viruses.

Professor Sambrook was elected to the Academy in 2000 and Royal Society of London in 1985. He was internationally renowned for his classic studies on DNA tumour viruses and the molecular biology of eukaryotic cells. He also made major contributions towards understanding intracellular traffic and protein folding and was an influential leader in the field of the molecular genetics of human cancer.

Professor Sambrook completed his PhD in virology at the John Curtin School of Medical Research, ANU and his postdoctoral studies at the Salk Institute, USA in the late 1960s. He then worked at the Cold Spring Harbor Laboratory in New York until 1985, and then at the University of Texas Southwestern Medical School. Professor Sambrook returned to Australia in 1995 where he was appointed Director of Research at the Peter MacCallum Research Institute and was a Professor in the Department of Pathology, University of Melbourne. He was also the founder and director of the Kathleen Cunningham Consortium for research into familial breast cancer, KConFab, established in 1995.



Dr Robert Donald Bruce Fraser FAA



Professor Joseph Frank Sambrook FAA FRS