

MAY 2021

# NEWSLETTER

NUMBER 149



The new Fellows of 2021

## Message from the President—May 2021

May 31, 2021



I have the pleasure of warmly welcoming our 2021 Fellows, newly elected to the Academy. This year 22 exceptional scientists join our ranks from a diverse cross-section of Australian science. All are global leaders in their fields

as well as distinguished in Australia, and I look forward to collaborating with them to achieve the Academy's goals. I also welcome two new Corresponding Members, Emeritus Professor Eleanor Dodson and Sir Fraser Stoddart. This is an acknowledgment of the outstanding contribution to science made by our international colleagues with strong ties to Australia.

The Academy will deliver its annual event, Science at the Shine Dome, in a new format in 2021 to accommodate COVID-19 restrictions while reaching new audiences online. There will be online presentations by award recipients, a symposium with the theme 'Science and the Public Good', and ceremonies celebrating the admission of the 2020 and 2021 new Fellows to the Academy. I encourage you all to participate; you can find out more at the **Science at the Shine Dome website**<sup>1</sup>.

Misinformation on the science of immunisation is impacting on the COVID-10 vaccine rollout in Australia. To provide trusted answers to common questions about vaccines, the Academy, with support from the Australian Government Department of Health, has updated its guide, The Science of Immunisation, which helps Australians understand scientific information about immunisation so that everyone can make well-informed healthcare decisions. I thank the Expert Working Group members for contributing

<sup>1</sup> [aas.eventsair.com/2021-science-at-the-shine-dome/](https://aas.eventsair.com/2021-science-at-the-shine-dome/)

their time and expertise to this important project. The guide is available for free online, and as a printed booklet for distribution through clinics and community groups.

Finally, the Academy is proud to release its 2020 Annual Report, where you can read about our achievements last year and how the Academy adapted to the challenges thrown our way. The year 2020 was a pivotal one for us, demonstrating how important the Academy's role is for Australian science.

I hope you enjoy this month's newsletter.

**John Shine**

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## Twenty-two Australians recognised among our nation's most distinguished scientists

May 25, 2021

### New Fellows

The Australian inventor of 3D-printed bone substitutes is among a group of scientists being acknowledged today for their outstanding contributions to science.

Professor Hala Zreiqat and her team developed world-first techniques for 3D-printing strong, bio-compatible ceramic materials that can bond to and help repair bones. This is leading to the development of new orthopaedic implants, including the world's first synthetic material for healing large areas of bone while supporting weight.

The Jordanian migrant who came to Australia in 1991 to pursue her dream of medical research is one of 22 scientists newly elected a Fellow of the Australian Academy of Science.

The 2021 Fellows also include Professor Ian Reid, whose work on real-time robotic vision has applications in self-driving cars and robot-assisted construction; and Professor Alison Rodger, whose techniques for understanding complex biological molecules using polarised light are now applied

in pharmaceutical research and development around the world.

Other new Fellows' contributions include developing statistical theories to improve weather forecasting, growing 'qubits' which form the architecture of quantum computers, and revealing how plant cells communicate with each other about changes in their environment.

Australian Academy of Science President, Professor John Shine, congratulated the new Fellows for their achievements on the international stage.

"These researchers have not only been at the forefront of Australia's scientific community, but have also been leaders in global science," said Professor Shine.

"The 2021 Fellows were elected by their Academy peers after a rigorous evaluation. I warmly congratulate and welcome each Fellow on their election and for their extraordinary contribution to science and society."

Fellows of the Australian Academy of Science are among the nation's most distinguished scientists, elected by their peers for ground-breaking research and contributions that have had clear impact. This year's cohort is made up of 41% women and 59% men. Over the past five years, 35% of the Fellows elected have been women. Following the 2021 election of our new Fellows, the Fellowship now stands at 576 Fellows.

The 2021 Fellows **will be formally admitted to the Academy**<sup>2</sup> on 3 November, with each new Fellow presenting their work and achievements in talks aimed at a general audience on the following day.

The Academy's new Fellows for 2021 are:

### ACT

**Professor Dorrit Jacob FAA**—Geochemist, Australian National University

**Professor Barry Pogson FAA**—Plant biologist, Australian National University

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2 [aas.eventsair.com/2021-science-at-the-shine-dome/new-fellow-events](https://aas.eventsair.com/2021-science-at-the-shine-dome/new-fellow-events)

## QLD

**Professor Catherine Lovelock FAA**—Ecologist, University of Queensland

**Professor Margaret Sheil AO FAA FTSE**—Vice-Chancellor and President, Queensland University of Technology (Special Election)

## SA

**Professor Ian Reid FAA FTSE**—Computer vision researcher, University of Adelaide

## TAS

**Professor Barbara Nowak FAA**—Fish health researcher, University of Tasmania

## VIC

**Professor Steven Chown FAA**—Antarctic ecologist, Monash University

**Professor Arthur Christopoulos FAA FAHMS**—Molecular pharmacologist, Monash University

**Professor Brendan Crabb AC FAA FAHMS**—Microbiologist, Burnet Institute

**Professor Mark Dawson FAA FAHMS**—Cancer biologist, Peter MacCallum Cancer Centre

**Professor Robin Gasser FAA**—Parasitologist, University of Melbourne

**Professor Rob Hyndman FAA FASSA**—Statistician (forecasting), Monash University

**Professor John Sader FAA**—Applied mathematician (nanoscale systems), University of Melbourne

**Professor Gordon Smyth FAA**—Statistician (genomics), Walter and Eliza Hall Institute of Medical Research

**Professor Svetha Venkatesh FAA FTSE**—Computer scientist (machine learning), Deakin University

## NSW

**Dr Gregory Clark AC FAA FTSE**—Non-Executive Director, NextDC (Special Election)

**Professor Susan Coppersmith FAA**—Condensed matter physicist, University of New South Wales

**Professor Yihong Du FAA**—Mathematician (differential equations), University of New England

**Professor Glenda Halliday FAA FAHMS**—Neuroscientist, University of Sydney

**Professor Andrew Pitman AO FAA**—Climatologist, University of New South Wales

**Professor Alison Rodger FAA**—Biochemist, Macquarie University

**Professor Hala Zreiqat AM FAA FTSE FAHMS**—Biomedical Engineer, University of Sydney

Find out more about our 2021 Fellows<sup>3</sup>

## New Corresponding Members



Sir Fraser Stoddart and Professor Eleanor Dodson. Photo: supplied

Also admitted to the Academy this year are two Corresponding Members.

Corresponding Membership is a special category within the Fellowship, comprising eminent international scientists with strong ties to Australia who have made outstanding contributions to science. As of this year, there are 34 Corresponding Members of the Academy.

The Academy's new Corresponding Members for 2021 are:

**Sir Fraser Stoddart FAA FRS Nobel Laureate**—Chemist, Northwestern University, USA

Sir Fraser is a 2016 joint Nobel Laureate in chemistry and one of the few chemists during the past 35 years to have created a new field of chemistry: mechanostereochemistry. He pioneered the development of techniques now employed as molecular switches in the fabrication of molecular electronic devices and in the design and synthesis of artificial molecular machines.

**Emeritus Professor Eleanor Dodson FAA FRS**—Computational biologist, University of York, UK

<sup>3</sup> [www.science.org.au/fellowship](http://www.science.org.au/fellowship)



Professor Dodson’s work has brought the ability to understand large molecule structures into the public realm, revolutionising science and medicine. Known as a great teacher and influencer in the field of protein crystallography, she has made major contributions to both theory and practice.

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## The science of immunisation—common questions answered

May 14, 2021



The Australian Academy of Science has launched a **new guide about the science of immunisation**<sup>4</sup> to help counter misinformation and uncertainty surrounding vaccines for COVID-19 and other diseases.

The guide, which was developed with the support of the Australian Government Department of Health, answers common questions including:

- What is immunisation?
- What is in a vaccine?
- Who benefits from vaccines?
- Are vaccines safe?
- What does the future hold for vaccination?

It highlights that the vaccines currently in use in Australia provide benefits that greatly outweigh the risks of associated adverse side effects.

Academy President, Professor John Shine, said despite the benefits of immunisation and vaccine development being well established after decades of scientific research, it can be challenging to understand how immunisation

works or where to find trusted and independent information.

“The continuing spread of misinformation about vaccines is making it difficult to understand whether a claim is based on credible scientific evidence.

“Herd immunity, adverse events, efficacy: these are just some of the vaccine-related terms people are hearing regularly in the media that they may not understand as we manage the COVID-19 pandemic or in relation to vaccines that protect us from other diseases.

“This booklet explains these terms and provides up-to-date information about the science of immunisation in clear and easy-to-understand language with the aim of giving confidence to individuals to make informed health decisions based on science,” said Professor Shine.



Watch on Vimeo<sup>5</sup>

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### ‘Vaccination saves lives’



Professor Carola Vinuesa. Photo: Australian Academy of Science

The guide was prepared by an expert working group comprising leading medical practitioners and researchers including Australian Academy of Science Fellow Professor Carola Vinuesa.

Professor Vinuesa said the guide is designed to build trust and understanding among the public of the scientific process behind vaccines.

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<sup>4</sup> [www.science.org.au/education/immunisation-climate-change-genetic-modification/science-immunisation](http://www.science.org.au/education/immunisation-climate-change-genetic-modification/science-immunisation)

<sup>5</sup> [vimeo.com/524742125](https://vimeo.com/524742125)

“It is encouraging to see that immunisation rates for a range of diseases continues to rise and is historically high,” Professor Vinuesa said.

“The act of vaccination saves lives and can limit and prevent infectious diseases around the world, which still account for around 40 per cent of all recorded deaths globally.”

The guide makes clear that scientists and health authorities keep a **close eye on the safety and effectiveness of vaccines**<sup>6</sup>, including after vaccines are rolled out to the public.

General Practitioner Dr Preeya Alexander was a member of the expert working group that developed the guide. She said discussing vaccine concerns with a trusted health professional is one of the best ways for people to understand what scientists and public health professionals know about a disease and the best protection against it.

“However, it is equally important for health professionals to listen openly to those concerns,” said Dr Alexander.

## Read the guide

The guide is available fully online as web content, as a downloadable PDF, and in print, and there are short easy-to-understand videos to watch and share.

Anyone can order free printed copies of the document through the Australian Academy of Science website. Read more at [www.science.org.au/immunisation](http://www.science.org.au/immunisation)<sup>7</sup>.

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## Academy reports COVID-19 response and other achievements of 2020

May 31, 2021



National leadership and collaboration in support of Australia’s response to COVID-19 are among the many achievements highlighted in the Academy’s **recently published annual report for 2020**<sup>8</sup>.

The Academy created a COVID-19 **news and resources hub**<sup>9</sup> and played a proactive role in the Australian pandemic response by joining with the Chief Scientist and other learned academies to form the Rapid Research Information Forum, providing timely and expert advice to government.

The Academy also developed an expert database that connects 1800 experts with stakeholders, and shared accessible evidence-based information for a broad audience through its online communication channels. It developed and adapted education resources for teachers, parents and students to support emergency remote teaching, and initiated Global Science TV in partnership with the International Science Council.

“2020 was an extraordinary year for society and for science. The Academy demonstrated its strength and relevance in guiding decision-making and we were able to reinforce the importance of the Academy’s independent voice for science in Australia,” said Academy Chief Executive Anna-Maria Arabia in her introduction to the report.

“Through analysis of Australian media reports in June, the Australian Science Media Centre revealed that the Academy was among the top 10 most prominent institutions in the pandemic, illustrating the vital role experts play in building public confidence.”

Academy Fellows received many Australian and international honours and awards. Emeritus Professor David Blair, Professor David McClelland and Professor Susan Scott, with their colleague Professor Peter Veitch, were jointly awarded the Prime Minister’s Prize for Science for their significant contribution to the first direct detection of gravitational waves, while Professor Thomas Maschmeyer was awarded the Prime Minister’s Prize for Innovation.

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6 [www.science.org.au/curious/people-medicine/vaccine-safety-and-effectiveness-how-it-tested](http://www.science.org.au/curious/people-medicine/vaccine-safety-and-effectiveness-how-it-tested)

7 [www.science.org.au/education/immunisation-climate-change-genetic-modification/science-immunisation](http://www.science.org.au/education/immunisation-climate-change-genetic-modification/science-immunisation)

8 [www.science.org.au/about-us/governance/annual-and-financial-reports/annual-report-2020](http://www.science.org.au/about-us/governance/annual-and-financial-reports/annual-report-2020)

9 [www.science.org.au/covid19/news-and-resources](http://www.science.org.au/covid19/news-and-resources)



Watch on Vimeo<sup>10</sup>

Other achievements featured in the annual report included:

- publishing a statement on the link between the frequency and intensity of extreme weather events and climate change
- producing a series of evidence briefs on the 2019–20 bushfires
- announcing two new career honorific awards to start in 2021
- supporting early- and mid-career researchers in a variety of ways
- hosting the Catalysing Gender Equity conference in collaboration with SAGE.

The Academy welcomed more than 5.4 million visitors to its websites and published nearly 90 videos that were embedded in online mainstream media stories more than 700 times.

It also weathered a severe hailstorm that damaged its two historic Canberra buildings, including the heritage-listed Shine Dome.

“The bushfires, hailstorm and the pandemic have shown that when confronted by crises, the science sector is resilient, able and generous,” Ms Arabia said.

“I am immensely proud of the Academy’s work, made possible by the guidance and support of our Fellows and the generosity of our donors. We thank Fellows for generously giving their expertise and time to the Academy and recognise that their contribution to the pandemic response has been nothing short of extraordinary.”

## How did science feature in the Budget? Australia’s leading scientists respond

May 11, 2021



The Australian Academy of Science says the 2021–22 Federal Budget contains mixed news for science.

Academy President Professor John Shine says it is important for Australia’s future to ensure we have strong investment in basic research to be able to translate discoveries.

The Budget contains no significant new funding for fundamental discovery science and no initiatives to stem the loss of university science jobs.

“The Academy welcomes the commitment to develop an Australian mRNA manufacturing capability to fight COVID-19, the flu and future pandemics,” Professor Shine said.

“The Academy is pleased the Government has **heeded our advice**<sup>11</sup> to future-proof Australia with the development of such a capability.

“Developing the capability will allow Australia to build resilience to future pandemics and potential biosecurity threats that require us to have the onshore capacity to mass produce vaccines.

“The Academy’s **mid-term review of the 10-year plan for astronomy**<sup>12</sup> published last year recommended Australia pursue realisation of the full SKA Observatory. We are pleased the Government has honoured its commitment

<sup>10</sup> [vimeo.com/468865063](https://vimeo.com/468865063)

<sup>11</sup> [www.science.org.au/supporting-science/science-policy-and-analysis/submissions-government/2021-22-pre-budget-submission](https://www.science.org.au/supporting-science/science-policy-and-analysis/submissions-government/2021-22-pre-budget-submission)

<sup>12</sup> [www.science.org.au/supporting-science/science-policy-and-analysis/decadal-plans-science/decadal-plan-australian-astronomy-2016-25-mid-term-review](https://www.science.org.au/supporting-science/science-policy-and-analysis/decadal-plans-science/decadal-plan-australian-astronomy-2016-25-mid-term-review)

to this by providing \$387.2 million over ten years,” he said.

The Academy also welcomes Budget measures including:

- A 10-year investment to support the implementation of the Technology Investment Roadmap and Low Emissions Technology Statements including \$761.8 million over the forward estimates. These initiatives are welcome, however, remaining paramount are greater global efforts to further limit greenhouse gas emissions and Australia’s further participation in that effort.
- A range of measures to improve climate adaptation, including investments to stimulate the blue economy; support for a National Soils Strategy; support for biodiversity on agricultural lands; funding to establish an independent statutory Environment Assurance Commissioner; extension of recycling initiatives; and funding to establish the Australian Climate Service.
- \$42.4 million to co-fund scholarships for women in STEM in partnership with industry.
- \$10.4 million for medical research including support for more clinical trials in Australia and to introduce mitochondrial donation into research settings.
- The patent box initiative to encourage innovation in the medical and biotech sectors.

## Two Academy Fellows elected to Royal Society

May 06, 2021



From left: Professor Marilyn Renfree AO FAA FRS, Professor David James Craik FAA FRS. Images: supplied.

Two Academy Fellows, Professor Marilyn Renfree and Professor David Craik, have been elected as Fellows of the Royal Society, the world’s oldest scientific academy in continuous existence.

Professor Renfree said that it was “a little surreal” to hear the news, and Professor Craik said he felt “very excited”.

“Stunned might be a better word,” he said. “Looking through the list of current and past fellows I am just awe-struck to be amongst them.”

They are among 49 Fellows, one Honorary Fellow and 10 Foreign Members worldwide who have been recognised for their outstanding contributions to scientific understanding.

Past Fellows and Foreign Members of the Royal Society have included Lise Meitner, Albert Einstein, Dorothy Hodgkin and Stephen Hawking.

Royal Society President, Sir Adrian Smith, said the global pandemic has “demonstrated the continuing importance of scientific thinking and collaboration across borders”.

“Each Fellow and Foreign Member brings their area of scientific expertise to the Royal Society and when combined, this expertise supports the use of science for the benefit of humanity.

“Our new Fellows and Foreign Members are all at the forefronts of their fields, from molecular genetics and cancer research to tropical open ecosystems and radar technology. It is an absolute pleasure and honour to have them join us,” said Sir Adrian.



The Fellowship of the Royal Society are the most eminent scientists, engineers and technologists from or living and working in the UK and the Commonwealth. Each year up to 52 Fellows and up to 10 Foreign Members are elected from a group of about 700 candidates.

We asked both Fellows about their election to the Royal Society and what has inspired their work.

## Professor Marilyn Renfree



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Professor Marilyn Renfree.  
Photo: Supplied

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University Laureate Professor and Ian Potter Chair of Zoology, Department of Zoology, University of Melbourne

### Royal Society citation

Professor Marilyn Renfree is a world authority on marsupial biology, conducting physiological, developmental, molecular, and epigenetic studies that greatly expanded our understanding of reproduction and development including original findings about the wallaby, platypus and koala genomes. She discovered that marsupials have functional placentae, sophisticated lactational strategies, and both lactational and seasonal controls of embryonic diapause. Her work on Australian marsupials has revealed novel aspects of mammalian evolution and reproduction giving deeper insights into eutherian mammal biology. She discovered how sexual dimorphisms can be controlled directly by sex-linked genes rather than gonadal hormones and discovered a new androgen pathway explaining certain human disorders of sexual differentiation.

### How did it feel when you were notified that you had been elected, from a pool of up to 700 candidates?

It was very exciting to learn of my election and wonderful to have been recognised this way.

### Are there any Fellows of the Royal Society who have been a particular source of inspiration for you?

Dame Anne McLaren, who was the first woman to hold office in the Royal Society and with whom I did a post-doctoral Fellowship in Edinburgh;

E.C. [Emmanuel Ciprian] Amoroso, renowned placentologist, whom with I had the privilege of co-authoring one of his very last publications during a short sabbatical I had in Cambridge; and of course my husband, Roger Short, who is also a Fellow of the Australian Academy of Science.

### What inspired you to pursue your path in science?

My PhD supervisor and Academy Fellow, Hugh Tyndale-Biscoe, as well as my love of the outdoors and my passion to work on reproduction and development of Australian animals as alternative models to the ubiquitous mouse.

### Why does science matter, particularly now?

There is nothing more important than science. We benefit from science in every way in our everyday lives, although most people do not think about this. The reason COVID vaccine development was so 'fast' is that it was the result of the previous decades' basic research that enabled, with amazing international cooperation, such rapid progress. In my field of reproduction and development, I quote my husband: "Reproduction is the science of the transmission of life! What could be more important than that?"

## Professor David Craik



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Professor David Craik. Photo: supplied

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Director, Australian Research Council Centre of Excellence for Innovations in Peptide and Protein Science, Institute for Molecular Bioscience, The

University of Queensland

### Royal Society citation

Professor David Craik has pioneered the discovery, structural characterisation and applications of circular proteins, including the cyclotide family of cyclic plant proteins. His findings have revolutionised the understanding of protein topology and of how cyclic peptides are biosynthesised. He has used insights into natural circular proteins to chemically redesign natural peptides to dramatically improve their biopharmaceutical properties. His methods are



used worldwide to address fundamental problems in protein chemistry and have ushered in a new era of stable peptide-based therapeutics.

## How did it feel when you were notified that you had been elected, from a pool of up to 700 candidates?

I happened to be at dinner with my wife at a restaurant overlooking the Brisbane River when the email came through on my phone, so we will always remember the moment I was officially notified. Perhaps the thing that touched me most was the kind emails of congratulations that I received from Fellows during the embargo period, amongst them were two Nobel Prize winners. That kindness and recognition is that something that I could never have dreamt of happening when I grew up as a boy in the outer suburbs of Melbourne when no one from my family had ever been to university before.

## Are there any Fellows of the Royal Society who have been a particular source of inspiration for you?

Amongst recent fellows, Iain Campbell, a world leader in the field of NMR spectroscopy and structural biology was one I greatly admired, and I was most fortunate to spend a short sabbatical leave in his laboratory in 1991. Sadly, he passed away in 2014, but I remember him as a brilliant and humble role model who had welcomed many Australian scientists to his laboratory. Closer to home I have always been impressed with Peter Colman's work on the structure of neuraminidase that led to the development of the anti-flu drug Relenza.

## What inspired you to pursue your path in science?

It was a sabbatical visit to Iain Campbell's laboratory at Oxford in the early 1990s where I determined the structure of an obscure peptide called 'kalata B1', which came from a weedy looking plant called *Oldenlandia affinis* that grew in the Congo and was used in traditional medicine. The cyclotide structure was quite unique at that time, [and] I wondered whether there might be other examples of such a weird structure in peptides from other plants. That was my excuse to travel around Australia and around the world looking for plants. When it became clear

that kalata B1 was not just a one-off peptide, in collaboration with Professor Marilyn Anderson we were able to show that cyclotides are host defence molecules, protecting plants from insect pests. In summary, the inspiration to develop this field came from wanting to understand how nature uses molecules for survival of organisms: this was curiosity-driven research and little did I know it might lead to applied outcomes.

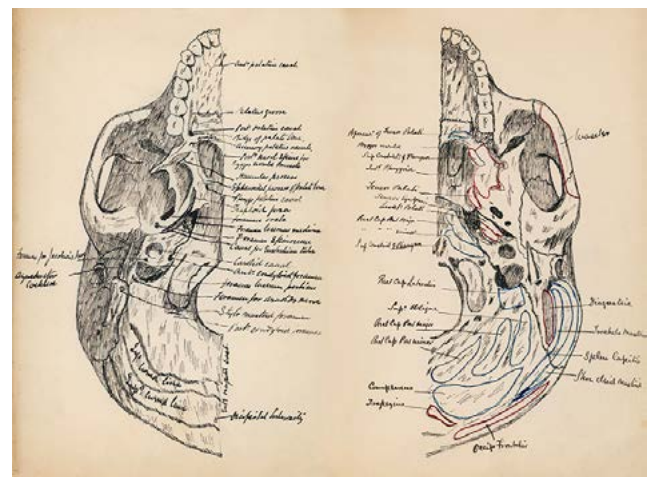
## What makes cyclotides special for making pesticides?

Plants make cyclotides to defend themselves against insects and other pests and pathogens, but not all plants have them. The butterfly pea has a particularly rich suite of cyclotides and defends itself very well against such pests. The Australian company Innovate Ag [which I worked with] has now developed a cyclotide-containing product which is an extract from the butterfly pea plant that is now approved for the protection of other crops such as cotton and macadamia nuts. The great thing about this product is that it is non-toxic to beneficial pollinators such as bees.

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## Digitisation of the Academy archives

May 31, 2021



Base of the skull from below by Charles Fenner (MS178 000004)

Digitisation at the Academy is opening new pathways into the historic archive and library collections donated by numerous Fellows of the Academy, other prominent scientists and scientific organisations.

The digitisation project began in late 2020 and has focused on evaluating the condition of fragile collection material, improving conservation and capturing images and associated descriptive data in a way that is searchable and freely available online to researchers around the world.

Already the project has captured some extraordinary material, including Professor Frank Fenner's diary entry from 8 May 1980, when he stood before the World Health Organization Assembly in Geneva and officially declared smallpox eradicated.

There are exquisite hand-drawn anatomy diagrams by Charles Fenner, diary entries written by geologist T.W. Edgeworth David halfway up an active Antarctic volcano, and correspondence from Walter George Duffield—the first Director of Mount Stromlo Observatory in the ACT—to his wife Doris that begin as love letters before swerving into an analysis of solar physics research in early twentieth-century Australia.

## Accessing the digital collection

A new searchable catalogue of archive and library collections and images can be accessed via the Academy website, though some material is only available by special permission. **Contact the Academy**<sup>13</sup> to enquire.

**Search Academy collections**<sup>14</sup>

## Volunteering at the archives

The Academy is seeking volunteers to work with the archivist. Opportunities exist to assist with digitisation, and to work online to transcribe and extract vital information from our nationally significant history of science collection.

Interested volunteers should contact the archivist at [library@science.org.au](mailto:library@science.org.au)

## Digitisation project donation appeal

The Academy digitisation project is largely funded by donations from Fellows and friends of the Academy and would not be possible without

this support. Donations from organisations and individuals are welcome and will contribute toward the costs of digitising the archives. Donations may be made via the **Academy's website**<sup>15</sup> or through contacting the Academy's Philanthropy Manager, Isobel Griffin, by **email**<sup>16</sup> or phone on **02 6201 9471**.



Watch on Vimeo<sup>17</sup>

## Academy hosts international education conference

**May 27, 2021**

The Academy recently hosted the 2021 Virtual Conference Far East Zone of the International Society for Design and Development in Education (ISDDE). ISDDE aims to improve the impact on education of the design and development of educational materials, particularly in mathematics, science and technology.

Fellows of the society are educational designers and project leaders with outstanding records from all around the world. Dr Kristen Tripet, Program Manager of the Academy's school mathematics program, reSolve, was admitted as a Fellow of the society in 2017.

The 2021 ISDDE conference was the first online event for ISDDE. The conference was hosted in three time zones and phases across 24 hours, with contributions from Far East, Europe/Africa and Americas zones. It included plenaries, interviews, panels and discussions, and focused

<sup>13</sup> [www.science.org.au/about-us/contact-us](http://www.science.org.au/about-us/contact-us)

<sup>14</sup> [ais.axiellcollections.cloud/SCIENCE/results](https://ais.axiellcollections.cloud/SCIENCE/results)

<sup>15</sup> [www.science.org.au/about-us/philanthropy-and-partnerships/philanthropy/make-history-us](http://www.science.org.au/about-us/philanthropy-and-partnerships/philanthropy/make-history-us)

<sup>16</sup> [isobel.griffin@science.org.au](mailto:isobel.griffin@science.org.au)

<sup>17</sup> [vimeo.com/430260327](https://vimeo.com/430260327)

on design in mathematics and science of curricula, resources, assessment, professional learning, teaching and learning with technology. Over 500 attendees participated from all over the world.



Dr Kristen Tripet, one of the team hosting the Far East Zone of the conference.



Hosting the conference required an understanding of the technical aspects.

The Far East Zone was hosted from the Academy's base in Canberra. Attendees from countries including Taiwan, Indonesia, New Zealand, Singapore, the USA and Australia joined the three-hour event. Together with design and strategy practitioner Michael Bloom, the Academy's Claudette Bateup and Nicola Dziadkiewicz presented a plenary on design of education materials with the teacher in mind, showcasing recent work undertaken by the Academy's science education program Primary Connections.

The event provided the opportunity to share experience with a broad audience and valuable professional experience for the Academy's education team about educational design and online event delivery.

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## More news

### Support Science at the Shine Dome

The Academy is delivering a dynamic new format in 2021 to accommodate COVID-19 restrictions while engaging new audiences online. Drawing on the Academy's Fellowship, 2.4 million social media followers along with its networks within the sector and mainstream media, exposure and reach associated with Science at the Shine Dome for **event partners**<sup>18</sup> is anticipated to be greater than ever before. To find out how you can become an Event Partner, email **Academy Partnerships Manager Tracey Murray**<sup>19</sup> to reserve your place.

### In brief

The Academy has provided a **submission**<sup>20</sup> to the National Health and Medical Research Council (NHMRC) on the NHMRC's draft Open Access Policy and Open Access Policy—Further Guidance documents.

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<sup>18</sup> <https://www.science.org.au/about-us/philanthropy-and-partnerships/partnerships/support-science-shine-dome>

<sup>19</sup> [tracey.murray@science.org.au](mailto:tracey.murray@science.org.au)

<sup>20</sup> <https://www.science.org.au/supporting-science/science-policy-and-analysis/submissions-government/submission-consultation-on-nhmrc-draft-open-access-policy>

## Opportunities for scientists

Find out about **current opportunities for scientists**<sup>21</sup>:

- Resilient Australia Award
- VinFuture Prize
- RACI National Awards
- John Maddox Prize
- Eppendorf & Science Prize for Neurobiology
- BBVA Foundation Frontiers of Knowledge Awards
- Andy Thomas Space Foundation EOS Space Systems Research Awards
- PhD opportunities: SmartSat Research Centre
- Order of Australia Honours

## Fellows update

Keep abreast of the Academy Fellowship in the **Fellows update**<sup>22</sup>:

- Honours and awards to Fellows
  - Obituary for Emeritus Professor Ross Taylor
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## Coming events

### Science at the Shine Dome—2021 Matthew Flinders Lecture

The next in the series of online Science at the Shine Dome events is the 2021 Matthew Flinders Lecture by Professor Andrew Holmes AC FAA FTSE FRS on 28 July 2021.

**Find out more and register**<sup>23</sup> for this and other events in this series now.

### Food for Thought

The Academy has plenty of tasty science this year with the Food for Thought speaker series. During this International Year of Fruit and Vegetables, these events are exploring the hidden world of the human gut's microbiome, the future of food and nutrition, and more. Events are in-person (Canberra) and online.

- Tuesday 8 June—**Gut Health**<sup>24</sup>
  - Tuesday 10 August—**Alternative Food Sources**<sup>25</sup>
  - Tuesday 12 October—**Food Security**<sup>26</sup>
  - Tuesday 14 December—**The Future of Food and Nutrition**<sup>27</sup>
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21 <https://www.science.org.au/academy-newsletter/may-2021-149/opportunities-scientists>

22 <https://www.science.org.au/academy-newsletter/may-2021-149/fellows-update>

23 <https://aas.eventsair.com/2021-science-at-the-shine-dome/>

24 <https://www.science.org.au/news-and-events/events/food-thought-gut-health>

25 <https://www.science.org.au/news-and-events/events/food-thought-alternative-food-sources>

26 <https://www.science.org.au/news-and-events/events/food-thought-food-security>

27 <https://www.science.org.au/news-and-events/events/food-thought-future-food-and-nutrition>