



THE BULLETIN 444

THE ROYAL SOCIETY OF NEW SOUTH WALES

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SEPTEMBER 2020

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- 17 SEP

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Schools: Plan and Paradox](#)

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Patron of The Royal Society of NSW

Her Excellency The Honourable
Margaret Beazley AC QC
Governor of New South Wales

1286TH OGM AND OPEN LECTURE

The Dawn of Molecular Medicine — Gene Therapy: past, present and future

Wednesday, 2 September 2020



Professor John Rasko AO

Royal Prince Alfred Hospital and Centenary Institute
University of Sydney

Date/time: Wednesday 2 September 2020, 6:30 PM

Venue: [Zoom Webinar](#)

Entry: No charge

Enquiries: [via email](#)

All are welcome.

See [page 3](#) for more information

From the President

Until a few days ago, I had no comprehension of the fascination that lies in old maps — that is, until I attended [an extraordinary Sydney exhibition of 100 rare maps](#). This exhibition comes from the personal collection of a renowned map collector, Robert Clancy, who happens to be part of the Royal Society family: he is a current member of our Council, and one of our Fellows. He is also an Emeritus Professor of Immunology at the University of Newcastle, but that is another story — one that resonates with the wide intellectual interests of our Royal Society.



The maps on display, dating from 1482, spell out a connected story of the development of European maps — from the early great voyages of discovery, when the maps were gloriously illustrated but very incomplete and inaccurate, to the increasingly precise maps by the time the western coast of Australia was discovered, to the voyages of Cook and his extraordinary mapping of the eastern coast of Australia, and finally to the development of Sydney as revealed in maps. And there are maps of the movement and location of indigenous communities in Australia, reminding us that the Australian story began 50,000 years earlier than that of the European adventurers.

You too can have the same experience if you can [join the guided tour](#) (guided by Robert himself) on 14 October. I must warn that the participants are restricted to 20 because of COVID-19 restrictions. But if the guided tour does not work for you, there is still the possibility of visiting yourself: the exhibition is on until October 18 at the Manly Art Gallery, which is in easy walking distance of the Manly Ferry Terminal. Be warned that the Gallery is closed on Mondays, and that in these COVID times it is open only from 10 AM to 3 PM. To maintain social distancing it is necessary to arrange timed free entry in advance, online via the [Gallery's web page](#).

A hint: at the Gallery, buy the catalogue of the exhibition. At a cost of only \$5 it is a bargain; the glorious cover from a 17th century map is alone worth the money.

Finally, I mention that some of Robert's maps were on display at his very successful Ideas@theHouse lecture '[Ten: The Mapping of Colonial Australia](#)' on maps associated with the first ten Governors of NSW. That fascinating talk is available to view at any time on the Society's [YouTube channel](#), which is easily reached through [the Society's website](#). While there, have a look at what else there is to offer; please consider subscribing to our YouTube channel, and also following us on [Facebook](#) to keep up with our events program: the Society's digital library collection of [presentations](#) and the [annual Forum](#) is growing rapidly because of our present and future ambition to make all our talks and events available online.

Enjoy and stay safe!

Ian H Sloan AO FRSN FAA
President, Royal Society of NSW

1286th OGM and Open Lecture

The Dawn of Molecular Medicine — Gene Therapy: past, present and future

Professor John Rasko AO

Royal Prince Alfred Hospital and Centenary Institute
University of Sydney

Date: Wednesday 2 September 2020, 6:30 PM

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All are welcome.

Over the next five years, a possible 900% increase in gene and stem cell therapy approvals has been forecast. The convergence of substantial incremental technical advances towards combined cell and gene therapy has led to improved clinical outcomes in immune deficiencies, haemoglobinopathies, blindness, immunotherapies and other inherited diseases. An audit of cell, tissue and gene products with marketing authorisation in 2018 worldwide identified 44 unique products: 37 of them are cell and tissue therapies (84%) and mainly autologous (55%).

The challenge of realising the full potential of genetic understanding has been vital in overcoming the hurdles of efficient gene therapy. Since the first human clinical trial using gene technology in 1989, there have been nearly 3,000 approved clinical trials worldwide. The overwhelming majority of human clinical trials involves short-term gene expression or random integration of a therapeutic gene. Emerging technologies require controlled development in compliance with safety, regulatory and GMP requirements. More precise gene targeting tools were first described in the early 2000s. Targeted gene editing or replacement using Zinc Finger Nucleases or TALENS have been tested in about a dozen clinical trials since 2009.

In parallel with objectively proven therapies, 'stem cell tourism' has become a billion dollar industry with increasing examples of false claims. Embryonic and induced pluripotent stem cells have been mired in controversy, and clinical development has been forestalled. We reported an analysis of the global distribution of more than 400 unique businesses marketing stem cell-based interventions. Many of these online entities promote clinical applications of 'stem cells' beyond present-day standards of care. These data should be of immediate concern to governments and ethicists being lobbied to amend laws governing the manufacture, distribution and clinical use of human cell-based medical products. Unregulated, untested or unsafe stem cell 'therapies' place the field at a difficult crossroad. Blurring the lines that distinguish evidence-based cell therapies from those that are not remains a fundamental public health concern.

Highlights in the clinical cell & gene therapy field will be discussed with special reference to haemophilia, thalassemia, graft versus host disease and cancer.

(continued overleaf)

1286th OGM and Open Lecture (continued)

Professor John Rasko is an Australian pioneer in the application of adult stem cells and genetic therapy. Since 1999, he has directed the Department of Cell and Molecular Therapies at Royal Prince Alfred Hospital and the Gene and Stem Cell Therapy Program at the Centenary Institute, University of Sydney. He is the President (2018–20) of the prominent International Society for Cell & Gene Therapy.

John Rasko is a clinical haematologist, pathologist and scientist with an international reputation in gene and stem cell therapy, experimental haematology and molecular biology. In over 160 publications, he has contributed to the understanding of stem cells and blood cell development, gene therapy technologies, cancer causation and treatment, human genetic diseases and molecular biology.

He serves on hospital, state and national bodies, including Chair of GTTAC, Office of the Gene Technology Regulator — responsible for regulating all genetically-modified organisms in Australia — and immediate past Chair of the Advisory Committee on Biologicals, Therapeutic Goods Administration. Contributions to scientific organisations include co-founding (2000) and past-President (2003–05) of the Australasian Gene & Cell Therapy Society; Vice President (2008–12) and President-Elect (2016–18) International Society for Cell & Gene Therapy; Scientific Advisory Committees and Board member for philanthropic foundations; and several Human Research Ethics Committees. He is a founding Fellow of the Australian Academy of Health and Medical Sciences. In 2018, the Board of the ABC honoured him as the sixtieth Boyer Lecturer. He is the recipient of national (RCPA, RACP, ASBMB) and international awards in recognition of his commitment to excellence in medical research, including appointment as an Officer of the Order of Australia.

Governor presents 2019 Society Awards

The Society was delighted that its Patron, Her Excellency The Honourable Margaret Beazley AC QC, Governor of NSW, was able to present the Society's 2019 Awards at a special ceremony in the Ballroom at Government House on Thursday, 13 August. The awards were unable to be presented at this year's Annual Dinner due to the current pandemic.



The ceremony was necessarily conducted under unusual conditions. The guests were limited in number and were seated according to the four square metre rule. The Governor passed the medals and certificates to the recipients across a suitably-sized table.

Governor presents 2019 Society Awards (continued)



In her remarks, The Governor spoke appreciatively of the Society's role in the intellectual life of New South Wales. She said how pleased she was to be able to present the awards at this time as it was the first major presentation event held at Government House since March because of the pandemic.



As well as the 2019 Awards, The Governor presented Scientia Professor George Paxinos AO DistFRSN with his Distinguished Fellowship of the Society.



The Society expresses its warmest congratulations to all recipients.

From L to R: Professor Kourosh Kalantar-Zadeh; Honorary Professor Evelleen Richards; Scientia Professor George Paxinos AO DistFRSN; Emeritus Professor Brynn Hibbert.



Following the ceremony, The Society was treated to a socially distanced morning tea on the terrace taking full advantage of the glorious winter sunshine and the recently restored gardens. We are very grateful to Her Excellency for making this special occasion possible under such difficult circumstances.

Moving the Society online during COVID-19 — Part 1

by Stuart Midgley

In February this year, a number of members of Council and of various committees of the Society were watching the growing COVID-19 outbreak with increasing alarm. Within the ranks of our society, including historians, immunologists and public health experts (amongst many others), the threat of a pandemic to rival 1919 was taken very seriously.

When the NSW Health Minister banned large public gatherings on 16 March, and with more restrictions considered likely, two groups within the Society who were already working on contingency plans stepped up their efforts.

The first was an informal technology group comprising Lindsay Botten (the Hon. Webmaster), Donald Hector (Councillor) and Stuart Midgley (a Councillor). The three had been discussing ways to improve the Society's broader IT systems for several months (to be elaborated in a later bulletin); they now dropped that gently-paced work and pitched headlong into a rapid assessment of the various technical options for taking the Society's meetings online.

Whilst this was being done, the second group — the Executive Committee, ably assisted by our Executive Officer Wendy Enevoldsen — began to work through a large quantity of policy and organisational issues. Most immediately, the implications of holding the Society's Annual General Meeting online — especially the associated voting — required much consideration. Questions of rule, propriety, exigency and technology all needed addressing.

The technology group's first task was to find a system that could deliver both large scale online video events to replace the Society's OGMs and lectures and small-scale video meetings to enable Council, the Executive and the other committees to continue to function. Whatever system was chosen also needed to be capable of being rolled out rapidly, with minimal technical assistance required by users.

In that hectic week, no fewer than six different video meeting and event systems were investigated and assessed before a recommendation was made to the Executive. Zoom was identified as being the easiest to roll out quickly, the easiest for members with little computer expertise to use, and as offering both a small private meetings system and a 'webinar' system designed for large events with public audiences. Other products in the market offered better features in one area or another; none could beat Zoom overall, especially when an immediate roll-out was required.

At the request of the Executive, the technology group also added an investigation of voting software to their work; thanks to extensive efforts by Lindsay Botten and Wendy Enevoldsen, the Executive and then Council were able to be reassured that secure, fair and timely elections could be held online.

On 23 March, the President was able to inform Fellows and Members that the AGM previously scheduled for 1 April would be rescheduled for later in the month, that both voting and the meeting itself would occur online, and that the Society would be moving to virtual events for the foreseeable future. Now that a course had been set, the work of delivering the events could begin.

To be continued ...

Seminar series: Stewardship of Country

Royal Societies of Australia to present national seminar series on Stewardship of Country

Stewardship of Country is a series of three webinars to be held later this year. It is an opportunity to exchange views with knowledgeable practitioners and experts in a national conversation on managing Australia's most valuable resource — its landscape.



Stewardship of Country will examine issues relating to the long-term management of Australia's landscape. It creates an opportunity to discuss and identify immediate and long-term goals for responsible and improved engagement with country, and to define possible solutions for common areas of concern as we plan for an unpredictable future.

Stewardship of Country is envisaged as three virtual events. The first will focus on where we are now, setting the scene across a range of disciplinary areas, the second on available and potential mechanisms and strategies, and the third on practical ways to bring the multidisciplinary threads together and achieve our goals of sustainable improvements to landscape management.

The series will consider a broad range of themes including sustainable land use, regenerative agriculture practice, what can be achieved with our soils, the future of Australia's climate and the importance of local and Indigenous knowledge with an emphasis on policy change informed by science.

The goal of *Stewardship of Country* is to create positive change and build a holistic platform on which to develop resilience in agriculture and land use and define best practice in research, education and the use of new technologies. It aims to bridge Indigenous, agricultural, environmental and civic perspectives.

More information on speakers and how to register will be published in the next newsletter.



THE ROYAL SOCIETIES OF AUSTRALIA

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Report: Southern Highlands Branch

We have been very appreciative of the generous assistance that Professor Lindsay Botten and Stuart Midgley have given us in technological input. In particular, our President Hubert Regtop and Lindsay have worked together on our last six months activities and events, to convert these documents to the format required for the RSNSW Sydney web pages. In addition, both Lindsay and Stuart have happily agreed to assist in our September Zoom session with Dr Sandra Lynch.

Our next scheduled lecture is on September 17, where a Zoom presentation will be made by Dr Sandra Lynch. Please find details below.

Anne Wood FRSN
Hon.Sec. Southern Highlands Branch

Topic: Philosophical Ethics in Schools: Plan and Paradox

Adjunct Professor Sandra Lynch
Institute for Ethics and Society
University of Notre Dame Australia

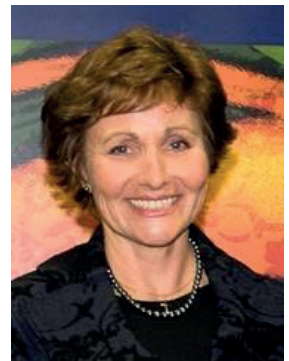
Date: Thursday 17 September 2020, 6:30 PM

Venue: [Zoom Webinar](#) ([Obtain help in getting started with Zoom](#))

Entry: No charge

Enquiries: [via email](#)

All are welcome.



This presentation considers the rationale for, and the value of, the teaching of philosophy in contemporary classrooms, particularly in relation to the teaching of ethics. It explores the suppositions we bring to the philosophy classroom, how we might best meet our aims in regard to teaching ethics and the challenges we face in achieving those aims. The different approaches taken to the teaching of philosophical ethics in schools in Australia suggests both the need for greater clarity of purpose in this enterprise and the need to convince educational administrators as well, as the broader community of the value of training those who undertake the teaching of philosophical ethics in schools.

Professor Sandra Lynch is the former inaugural Director of the Institute for Ethics and Society and currently Adjunct Professor of Moral Philosophy at the University of Notre Dame Australia (Sydney campus). Dr. Lynch's expertise lies in applied and professional ethics, ethics and values education, the constitution of the self, friendship, critical thinking, and the intersection of philosophy and literature. Her recent research has focussed on models for the teaching of professional ethics, particularly in healthcare ethics, both within educational and professional practice contexts.

Report: Hunter Branch

As is the case with all organisations involving a number of people, the Hunter branch has been confined to using Zoom meetings for its committee activities, and the Royal Society's technology platform for the delivery of its events. The Hunter branch of the Royal Society is very grateful to the work put in by Mr Stuart Midgley.

The branch sponsored an event on **29 July**. The speaker was Professor Pia Ednie-Brown of the School of Architecture & Built Environment, University of Newcastle, who gave a talk 'Architecture and the Cultivation of Vitality'.

1. At a committee meeting held on **17 August**, it was decided that the Hunter branch would sponsor two events in the rest of the year. Unfortunately, the chief scientist is very heavily committed and unable to speak in late October. The Hunter branch has been fortunate in that it will co-sponsor with the University of Newcastle, Prof Janet Nelson's talk to be held on Monday, **26 October**. Prof Nelson will be speaking as part of the series of 'Looking Ahead' lectures being promoted by the University. Professor Janet Nelson is the University of Newcastle's new Deputy Vice-Chancellor, Research and Innovation.
2. On **2 December**, the Hunter branch of the Royal Society will host an event at which the speaker will be Prof Tony Capon. Prof Capon was scheduled to talk in March this year, but the pandemic intervened. Professor Tony Capon is Director of the Monash Sustainability Institute, and Professor of Planetary Health in the School of Public Health and Preventive Medicine at Monash University. Tony is a public health physician and an authority in environmental health and health promotion. His research focus is on urbanisation, sustainable development and human health. An example of a recent publication is 'Human Health on an Ailing Planet: Historical Perspectives on our Future' (NEJM 2019;381:778).

The event to be held on **26/27 October** will be livestreamed by the University. Fellows are members of the Royal Society who wish to listen to this lecture will be given a link when it becomes available. The event to be held on **2 December** will probably be also a livestreamed presentation.

Other activities considered by the committee of the Hunter branch of the Royal Society of New South Wales include striking the Hunter medal. This will be a medal awarded for an outstanding contribution that benefits the people and the environment of the Hunter region.

Eugenie Lumbers AM DistFRSN
Hon.Sec., Hunter Branch

Report: Events Committee

by Christina Slade (Chair of Events) & Lindsay Botten (Webmaster)

The Royal Society of NSW has been extremely active since the last Bulletin.

On **29 July**, the Hunter Branch Meeting was addressed by Professor Pia Ednie-Brown, University of Newcastle, on the topic '[Architecture and the Cultivation of Vitality](#)'. She asked how the spaces we create affect our well-being, our creativity and cultural vitality and argued that architectural approaches aiming to cultivate vitality can be found through approaching place as a person. This changes the nature of our relationship with buildings and sites such that we don't design them, we design *with* them. Crucially, our relationship with places cultivates vitality through forging meaningful, living connections beyond ourselves.

On **5 August**, Professor Peter Radoll gave an address called '[Growing Tall Black Poppies](#)' following the 128th OGM. Professor Radoll told his own extraordinary story of working as a mechanic in northern NSW and taking up the opportunity of studying and working in the ACT. He completed his doctorate in information sciences at ANU. He is now Pro Vice-Chancellor Indigenous at the University of Canberra and talked of the importance of increasing the participation and success of indigenous Australians, urging Fellows and Members of the Society to consider mentoring or otherwise assisting indigenous students at university.

On **13 August**, The Society was delighted that its Patron, Her Excellency The Honourable Margaret Beazley AC QC, Governor of NSW, was able to [present the Society's 2019 Awards](#) at a special ceremony in the Ballroom at Government House. The awards were unable to be presented at this year's Annual Dinner, which had been held virtually because of the current pandemic. The Governor made it possible for the Awards ceremony to take place in person under COVID-safe rules. In her remarks, The Governor spoke appreciatively of the Society's role in the intellectual life of New South Wales. She said how pleased she was to be able to present the awards at this time, as it was the first major presentation event held at Government House since March because of the pandemic. As well as the 2019 Awards, The Governor presented Scientia Professor George Paxinos AO DistFRSN with his Distinguished Fellowship Certificate.

Two fellows, Emeritus Professor Robert Clancy ([The COVID Curve in Context; or Back to the Future — something old and something new](#)) and Emeritus Professor Brynn Hibbert ([The Periodic Table: '... a medley of haphazard facts falling into line and order'](#) — C. P. Snow) also recorded sessions for National Science Week which were made available on **18** and **20 August**.

Forthcoming events

- On Wednesday **2 September** 2020 following the OGM at 6:30 PM, Professor John Rasko AO, Head, Department of Cell & Molecular Therapies, Royal Prince Alfred Hospital, will discuss '[The Dawn of Molecular Medicine — Gene Therapy: past, present and future](#)'.

Report: Events Committee (continued)

- On Thursday **17 September** at 6:30 PM, Southern Highlands Branch will also make their event available on Zoom: Adjunct Professor Sandra Lynch, Institute for Ethics and Society, University of Notre Dame Australia, will present on [Philosophical Ethics and Schools: Plan and Paradox](#).
- On Wednesday **7 October**, following the OGM at 6:30 PM, Professor Huw Price of Cambridge FAHA FBA University will address the Society on the topic of 'Time's Arrow and Eddington's Challenge'.
- On Wednesday **14 October**, at 3:30 or 4:00 PM, COVID-19 permitting, Emeritus Professor Robert Clancy will show fellows and members through his exhibition '[Charting a course, a 500 year story of discovery and development of Sydney](#)' at the Manly Art Gallery and Museum, Sydney. Numbers will be limited. Those interested in joining the tour should contact event-chair@royalsoc.org.au
- On Wednesday **11 November** following the 1288th OGM, Professor Thomas Borody and Emeritus Professor Adrian Lee will address the society on '[How Good is NSW — the role of Helicobacter Pylori in Peptic Ulcer Disease](#)'.
- On Wednesday **2 December**, Professor Tony Capon of Monash University will address the Hunter branch on the topic of 'Planetary Health: Safeguarding Health in the Anthropocene Epoch'.

We urge you to catch up on sessions that you have missed on our [YouTube Channel](#) and to follow the Society on [Facebook](#).

Vale Professor Richard Stanton AO DistFRSN FAA (1926–2020)

The Society is saddened to learn of the death of one of its Distinguished Fellows, Professor Richard Stanton AO DistFRSN FAA, on 25 August 2020 at the age of 94. Richard Limon Stanton was a distinguished economic geologist who was honoured for his numerous achievements by being made an Officer of the Order of Australia in 1996.

Professor Stanton was a Fellow of the Australian Academy of Science, elected in 1975 for his original contributions to the genesis of ore deposits. He became an Honorary Fellow of the Institute of Mining and Metallurgy (London) in 1984, was Vice-President of the Australian Academy of Science (1989–1990), and was elected an Honorary Fellow of the Geological Society of America in 1991.

Professor Stanton was a long-serving Chair of the New England Branch of the Society and was awarded several of the Society's Awards, including the Archibald Ollé Prize, the Clarke Medal and the Royal Society Medal. He was made an inaugural Fellow of the Society in 2009 and elevated to Distinguished Fellowship in 2012. He will be greatly missed.



Nominate a colleague for a Society Award

Now is your chance to nominate a colleague or friend who you believe is eligible for a Royal Society of NSW Award. Nominations for the Royal Society of NSW Medal and the Royal Society of NSW Citations are now being sought from Society Members and Fellows. These Awards are for exceptional service to the Society, with the Medal being for meritorious contributions to the Society's administration, organisation, and endeavours.

You also have the opportunity to nominate a high achiever for the Society's other Awards. These prestigious prizes for excellence in science, technology, engineering, maths, agriculture, history, philosophy and the betterment of human society, are awarded regularly by your Society, Australia's oldest learned society. One, the Clarke Medal and Lectureship, has been awarded continuously since the time of Charles Darwin. They recognise outstanding achievement by Australians in their chosen field. Nominations for these Awards are also being sought from all universities in Australia, as well as from major research institutions.

In 2020, nominations are sought for the:

[Archibald Ollé Prize](#), [Clarke Medal](#), [Edgeworth David Medal](#), [History and Philosophy of Science Medal](#), [James Cook Medal](#), [Poggendorff Lectureship](#), [Royal Society of NSW Scholarships](#), and [Warren Prize](#).

Nominations are also sought for the [Royal Society of NSW Medal](#) and the [Royal Society of NSW Citations](#), each of which recognise substantive contributions, by a Member or Fellow, to the work of the Society.

Information about all the Awards, and instructions for making nominations can be found in the [‘Awards’ section of the Society’s website](#). Click on the Award name in the drop-down list under the ‘Awards’ menu to find details of each.

Nominations close on 30 September 2020 and should be sent to:

awards-nominations@royalsoc.org.au

For all Awards other than the Royal Society of NSW Medal and the Royal Society of NSW Citations, neither nominator nor nominee needs to be a Member or Fellow of the Society.

Council and Office-Bearers 2020/2021

The current Council and office-bearers of the Society are:

Patron	Her Excellency The Honourable Margaret Beazley AC QC, Governor of New South Wales
President	Emeritus Professor Ian Sloan AO FRSN
Vice-Presidents	Emeritus Professor Brynn Hibbert AM FRSN (immediate past President) Dr Susan Pond AM FRSN Ms Judith Wheeldon AM FRSN
Hon. General Secretary	Mr Bruce Ramage MRSN
Hon. Editorial Secretary	Emeritus Professor Robert Marks FRSN
Hon. Treasurer	Mr Richard Wilmott MRSN
Hon. Librarian	Mr John Hardie FRSN
Hon. Webmaster	Emeritus Professor Lindsay Botten FRSN
Councillors	Mr Ian Bryce MRSN Emeritus Professor Robert Clancy AM FRSN The Hon. Virginia Judge FRSN Mr Stuart Midgley MRSN Emeritus Professor Bruce Milthorpe FRSN Ms Nyrie Palmer MRSN Emerita Professor Christina Slade FRSN Adjunct Professor Robert Whittaker AM FRSN
Hon. Secretary, Hunter Branch	Emerita Professor Eugenie Lumbers AM DistFRSN
Hon. Secretary, Southern Highlands Branch	Ms Anne Wood FRSN

Editor: [Jason Antony](#)

