



# The Royal Society of New South Wales

*"for the encouragement of studies and investigations in Science Art Literature and Philosophy"*

## Minutes of the 1286<sup>th</sup> Ordinary General Meeting of The Royal Society of New South Wales held by ZOOM Webinar on Wednesday 2 September 2020 at 6.30PM.

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There were 69 Members, Fellows and guests in attendance.

### 1. WELCOME

The President, Emeritus Professor Ian Sloan AO FRSN presided at the meeting and introduced the panel members. He welcomed members and guests and gave an acknowledgement of country. He also referred to the Society's Diversity and Inclusion Policy.

#### 1.1 Minutes of the 1285<sup>th</sup> Ordinary General Meeting held on 5 August 2020

The Minutes of the previous Ordinary General Meeting, previously circulated, were approved.

### 2. CONFIRMATION OF MEMBERSHIP

As no valid objection was lodged within two weeks following the 1285<sup>th</sup> Ordinary General Meeting, the election of the following new Members took effect from the date of that meeting held on 5 August. Certificates will be presented at the first opportunity at a face-to-face meeting.

#### 2.1 Members

Mr Daniel Coghlan  
Dr Peter Hobbins

### 3. ANNOUNCEMENT OF NAMES OF CANDIDATES FOR MEMBERSHIP

If no valid objection is lodged within two weeks of this Ordinary General Meeting, that is, by 6.30pm on 16 September 2020, the election of the Fellows listed below will take effect from the date of the meeting.

#### 3.1 Fellows

Dr Noel Geoffrey Barton  
Professor Dane Robert McCamey  
Dr Graeme Laurence Cohen  
Emeritus Professor Annabelle Duncan  
Adjunct Professor Nick Lomb  
Professor John Harold Loxton  
Professor Huw Price  
Professor Peter John Radoll  
Dr Tristan Andrew Reekie  
Ms Belinda Robinson  
The Honorable Arthur Sinodinos

Professor David Iain Warton

## **4 REPORT FROM COUNCIL AND COMMITTEES OF COUNCIL**

The President brought to members' attention the following matters.

### **4.1 Presentation of 2019 Awards**

The President advised that the Society's Patron, Her Excellency The Honourable Margaret Beazley AC QC, Governor of New South Wales presented the 2019 Awards at a small ceremony at Government House on 13 August. 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.

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.

### **4.2 Strategic planning day**

Professor Sloan advised that the Executive had met on 25 August to develop a strategic plan for the Society for the period 2021 – 2023. He said the Council would consider the plan after it has been reviewed by Council committees and the Branches..

## **5 THIS EVENING'S PRESENTATION**

### **THE DAWN OF MOLECULAR MEDICINE—GENE THERAPY: PAST, PRESENT AND FUTURE**

**Professor John Rasko AO**

**Head, Department of Cell & Molecular Therapies, Royal Prince Alfred Hospital**

**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 currently the President of the International Society for Cell & Gene Therapy.

He is a clinical haematologist, pathologist and scientist with an international reputation in gene and stem cell therapy, experimental haematology and molecular biology. 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 and immediate past Chair of the Advisory Committee on Biologicals, Therapeutic Goods Administration. Contributions to scientific organisations include co-founding of the Australasian Gene & Cell Therapy Society; Vice-President and President of the 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, he was the ABC's sixtieth Boyer Lecturer.

He is the recipient of national and international awards in recognition of his commitment to excellence in medical research. He was made an Officer of the Order of Australia in the Queen's Birthday

Honours in 2012 for service to biomedical research in the field of gene and cell therapy, as a clinician, author, administrator and philanthropist.

A synopsis of the presentation is given below.

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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 authorization in 2018 worldwide identified 44 unique products, 37 of them being 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 are 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 and gene therapy field were discussed with special reference to haemophilia, thalassemia, graft *versus* host disease and cancer.

There followed a question and answer session moderated by Dr Susan Pond, Vice-President.

## **6 VOTE OF THANKS AND CLOSE**

The vote of thanks was given by Ms Judith Wheeldon, Vice-President.

The President closed the meeting at 8.01pm.