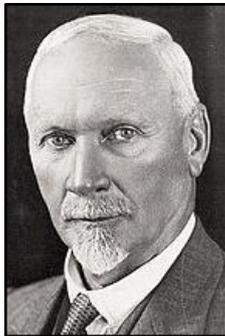


Recipients of the James Cook Medal

The Society's highest honour it is awarded on an occasional basis for
**'outstanding contributions to science and human welfare
in and for the Southern Hemisphere'**

1947



**Field Marshal, the Rt Hon. JAN C. SMUTS, OM CH ED PC
KC FRS** (Law, Education, Military Sciences)

Chancellor of the University of Cambridge, Prime Minister of South Africa (before the introduction of apartheid, and who extended old age pensions and disability grants to all groups regardless of diaspora), a former Boer Commando in the Second Boer War who none-the-less served with the Allies with distinction in WW1, being a member of the British War Cabinet during WW1 and WW2.

1948



Professor BERNARDO A. HOUSSAY (Physiology and Medicine)

Nobel Laureate – 1947 Physiology, specifically for discovering the role that pituitary hormones play in sugar metabolism, which helped towards providing an effective treatment for diabetes.

1950



Professor, Brigadier, Sir NEIL H. FAIRLEY, KBE CSJ FRS
(Medicine)

London School of Hygiene and Tropical Medicine, Australian Army Director of Medicine, who investigated an epidemic of *meningitis* that was occurring in Army camps in Australia. Who also, whilst with the 14th General Hospital in Cairo, also investigated *schistosomiasis* (then known as bilharzia) and developed tests and treatments for the disease. Further during WW2 in both in Greece and the South West Pacific affected changes to battle plans to reduce the risk of malaria.

1951



Dr, Sir NORMAN M. GREG, MC (Ophthalmology)
Ophthalmic surgeon at Royal Prince Alfred Hospital and at the Royal Alexandra Hospital for Children, who discovered the link between congenital cataracts of children following *rubella* (German Measles) in the mother.

1952



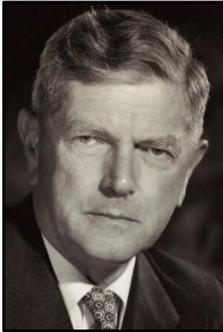
Professor WALTER L. WATERHOUSE, MC (Agriculture)
Australian National University, developed varieties of wheat which resisted rust.

1953



Professor, Sir A. C. DAVID RIVETT, KCMG (Chemistry)
University of Melbourne and chief executive of the Council for Scientific and Industrial Research (CSIR) during his tenure was specifically charged eradication of prickly pear through the introduction of *cactoblastis cactorum* after having previously established the application of the Phase Rule in Heterogeneous Equilibria.

1954



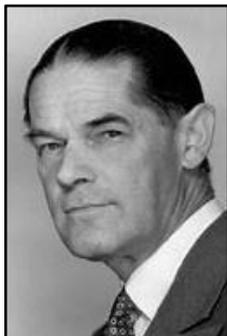
Professor, Sir FRANK MACFARLANE BURNET, OM AK KBE FRS FRSNZ (Medicine)
Nobel Laureate – 1960 Physiology, recipient of both the Copley and Royal Medals of the Royal Society of London for his research which greatly increased the understanding of immunology specifically with regards to the influence that each antigen could have upon the genome, thus effecting the production of antibodies and whether such antigens served as a selective stimulus, causing preferential proliferation and differentiation of the clones that have receptors for that antigen. Director of the Walter and Eliza Hall Institute.

55



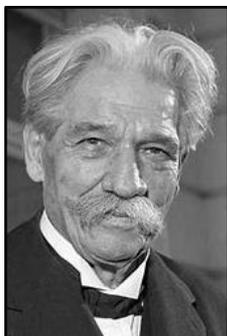
Reverend, Professor ADOLPHUS P. ELKIN, CMG (Theology and Anthropology)
University of Sydney and the Anglican Church, an activist for the amelioration of indigenous Australians, successfully intervened to prevent the execution of an Aboriginal Tuckiar for murder, leading to the eventual quashing of the conviction by the High Court in 1934. President of the Association for the Protection of Native Races.

1956



Sir W. IAN CLUNIES ROSS, CMG (Veterinary Science)
Chairman of the Commonwealth Scientific and Industrial Research Organization (CSIRO), during which he oversaw the release of *myxomatosis* for rabbit control in Australia. His own research into the hydatid parasite (*echinococcus granulosus*) and the liver fluke (*fasciola hepatica*) helped protect the Australian wool industry, whilst his research of the dog-tick (*Ixodes holocyclus*) led to his development of an immunization regime for dogs.

1959



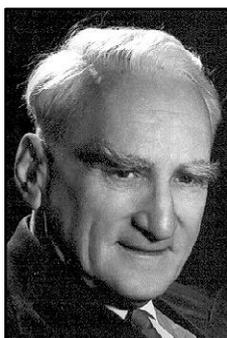
Dr ALBERT SCHWEITZER, OM (Theology)
Nobel Laureate – 1952 Peace Prize. Whilst he studied Protestant theology at the Kaiser Wilhelm University in Strasbourg and completed a PhD dissertation on *The Religious Philosophy of Kant* at the Sorbonne, he nonetheless trained as medical practitioner and worked with his wife at his own expense in the Paris Missionary Society's mission at Lambaréné on the Ogooué river, establishing a hospital in what is now Gabon, Africa. He was also a musical scholar who studied the piano at the Paris Conservatory.

1961



Professor, Sir JOHN ECCLES, AC FRS FRSNZ (Neurophysiology and Philosophy)
Nobel Laureate — 1963 Physiology, principally for his study of synapses in the peripheral nervous system later performing experiments which proved chemical synaptic transmission – he later explored a philosophical approach to neuroscience in his books, *The Understanding of the Brain* and *Facing Reality*. Sydney Medical School; John Curtin Medical Research Centre; University of Otago.

1964



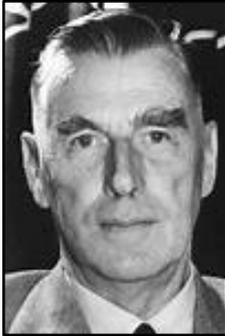
Dr MAX R. LEMBERG, FRS (Biochemistry and Theology)
President of the Royal Society of New South Wales 1956 who had a leading role with many institutions and studies. His speculation on the binding of the iron-complexes of porphyrins to protein as in the oxygen carriers, haemoglobin and myoglobin, and in the haematin enzymes, led to his early prominence in Australia upon his immigration to this nation in the interwar years, as was his emphasis on the importance of the conformational changes of the protein moiety of haemoproteins in determining and controlling the reactivity of the central iron of haematin enzymes, particularly cytochrome oxidase. Recipient of the Iron Cross (2nd class) during WW1, but subsequently he was dedicated to the furtherance of humane missions through the Society of Friends (the Quakers), preoccupied with the truths of human life through scientific research and built its Wahroonga Meeting House from the money of his *Britannica (Aust.) Prize for Science*, presented in 1965. He raised his voice against the abuse of scientific knowledge, against its misuse by military-economic juntas, and against political power-blocks' ability to lay waste man's environment, and its artistic and social heritage. Royal North Shore Hospital.

1965



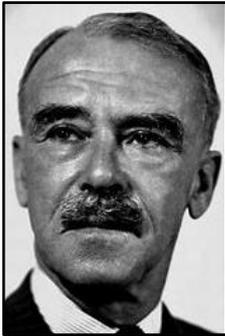
Dr, Sir JOHN GUNTHER, CMG OBE (Medicine and Public Administration)
Foundation Vice-Chancellor of the University of Papua and New Guinea, Director of Public Health in the then Territory of Papua-New Guinea. Government leader in the Legislative Council, chairman of the select committee on constitutional development that recommended the establishment of the first House of Assembly with universal suffrage, who also established the first school of medicine in that then territory.

1966



Sir WILLIAM HUDSON, KBE FRS (Engineering)
Chairman of the Snowy Mountains Hydro-Electricity Authority responsible for its design and construction.

1969



Major, the Rt Hon. RICHARD G. G., Lord CASEY of BERWICK, KG GCMG CH DSO MC KStJ PC, (Diplomacy and Public Administration)
Pre-WW2 Federal Treasurer who saw distinguished service during WW1. Governor of Bengal, where he was responsible for the recovery from the 1943 famine and civil unrest in the lead-up to independence; and member of the British WW2 War Cabinet. Post war: Minister for External Affairs, Minister responsible for the Commonwealth Scientific and Industry Research Organization (CSIRO), Minister for External Territories, Minister for Works and Housing, Ambassador to the United States, and Governor General of the Commonwealth of Australia.

1974



Sir MARCUS L. OLIPHANT, AC KBE FRS (Physics)
Played a key role in the first experimental demonstration of nuclear fusion, developing electromagnetic isotope separation. University of Birmingham, Australian National University, Governor of South Australia.

1975



Sir ALAN WALSH, FRS (Physics)
Developer of a method of chemical analysis called atomic absorption spectroscopy. Commonwealth Scientific and Industrial Research Organization, President of the Australian Institute of Physics

1977



Professor IRVINE A. WATSON, CBE (Botany)

A world leader in wheat research and a major contributor to the Australian wheat industry, being associated with the development and release of no less than 16 new high quality rust-resistant wheats. University of Sydney.

1978



Wing Commander, Sir LAWRENCE J. WACKETT, KBE DFC AFC (Aeronautics)

One of the inaugural 21 officers which formed the RAAF, Manager of the Commonwealth Aircraft Corporation, designer of the Warbler, followed by the Widgeon (which was a flying boat), the Wirraway followed by the Wackett Trainer and the Boomerang fighter in 1941.

1979



Professor ROBERT J. WALSH, AC(AO) OBE (Medicine)

Played a key role in the investigation of iron metabolism, which was of practical importance for the blood donors who had to speed up the manufacture of red cells in order to make up the loss they had incurred from their donation; and helping to solve blood banking by the use of available antibodies for the identification of blood groups, and in particular, the study of unexpected agglutination results occurring either in vivo or in vitro in the course of work at the Blood Transfusion Centre. The pursuance of this work, which included the discovery of the first example of an anti-S serum, led to studies of blood group antigens. Dean of Medicine at the University of New South Wales.

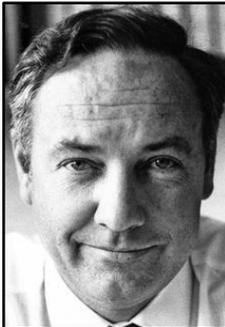
1984



Professor RONALD L. HUCKSTEP, CMG (Medicine)

Developer of the first interlocking nail for orthopaedic surgery and a modular cement-less titanium alloy hip and upper femoral replacement which bears his name. Foundation Professor and Head, Department of Traumatic and Orthopaedic Surgery; and Chairman, School of Surgery at the University of New South Wales. Professor of Orthopaedics at Makerere University in Kampala, Uganda.

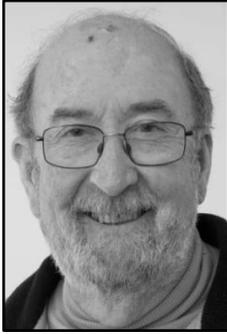
1985



Dr DONALD METCALF, AC FRS (Medicine and Biology)

Metcalf's research revealed the control of blood cell formation and the role of hematopoietic cytokines, developing to culture blood cells, which led to the discovery of colony-stimulating factors (CSFs), including macrophage colony-stimulating factor, granulocyte colony-stimulating factor and granulocyte macrophage colony-stimulating factor. Head, Cancer Research Unit and Assistant Director of the Walter and Eliza Hall Institute of Medical Research.

1987



PHILLIP G. LAW, AC (AO) CBE (Geography)

Director of Australian National Antarctic Research Expeditions, who mapped more than 5000 kilometres of coast and more than a million square kilometres of territory, establishing Australia's first permanent base, the Mawson Base, in the Antarctic. President of the Royal Society of Victoria (1967-68).

1991



Laureate Professor GRAEME M. CLARK, AC (Otolaryngology and Biomedical Engineering)

Inventor and developer of the cochlear implant known as the 'bionic ear'. University of Melbourne.

1994



Professor, Sir GUSTAV NOSSAL, AC CBE (Medical Biology, Immunology and Philosophy)

Significant contribution to the fields of antibody formation and immunological tolerance. Citing: 'a tremendously strong identification with the mission of the Church. An instinct for justice is central to that mission and central to being a Catholic... Science deals with fundamentally repeatable, objective, verifiable observations.but the human experience, on the other hand, does not just deal with verifiable facts.' University of Melbourne, Director of the Walter and Eliza Hall Institute of Medical Research.

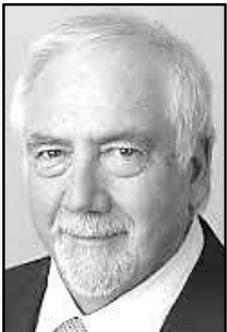
1999



Dr PETER COLMAN, AC FRS (Molecular Biology, Biochemistry, and Biophysics)

Through his research, especially of human B-cell lymphoma 2 (BCL-2), Colman determined the three-dimensional structure of the influenza virus neuraminidase and, in one of the earliest cases of structure-based drug design, discovered zanamivir, the first-in-class inhibitor for influenza. Head of the Structural Biology Division at the Walter and Eliza Hall Institute of Medical Research.

2013



Scientia Professor BRIAN HOLDEN, OAM (Ophthalmology)

A leader in the development of silicone hydrogel lenses against preventable blindness who established the Cornea and Contact Lens Research Unit at the University of New South Wales.

2015



Scientia Professor MARTIN GREEN, AM FRS (Foreign)

(Photovoltaics)

who has made a significant contribution to photovoltaic science and technology, including identifying the fundamental limits upon silicon solar cell performance and then leading his team to demonstrate experimental devices approaching this limit, with 25% cell efficiency now demonstrated. Who also developed innovative commercial versions of these high performance devices and pioneered the field of "third generation" photovoltaics, investigating advanced photovoltaic device concepts targeting Carnot-like solar conversion efficiencies. University of New South Wales.

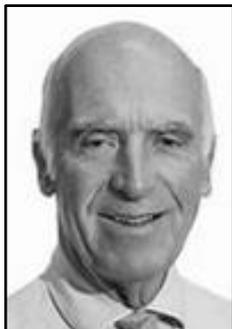
2016



Professor David COOPER, AO (Immunology and HIV)

Director of the Kirby Institute at the University of New South Wales, who with Professor Ron Penny diagnosed the first case of HIV in Australia, his research led to the first description of the seroconversion illness which accompanies initial HIV infection in many people. He then proceeded to take a leading role in most of the key trials that ultimately led to the optimal use of life-saving combination treatments that are now widely available to people with HIV all over the world.

2017



Scientia Professor Gordon Parker, AO (Psychiatry)

University of New South Wales, Director of the Division of Psychiatry at Prince of Wales and Prince Henry Hospitals, and inaugural Director of the Black Dog Institute, focusing on modelling psychiatric conditions (depressive, bipolar and personality disorders) and examining causes, mechanisms and treatments for mood disorders.

2018



Distinguished Professor ELIZABETH ELLIOTT, AM (Paediatrics)

A world leader in the research into Foetal Alcohol Syndrome Disorder, which is caused by prenatal alcohol exposure, who is recognised as the leading preventable cause of prenatal brain injury, birth defects, and developmental and learning disability worldwide. Also establishing and leading as Director of the Australian Paediatric Surveillance Unit (APSU), to facilitate study of rare childhood diseases. University of Sydney and the Children's Hospital at Westmead.

2019



Scientia Professor MATTHEW ENGLAND (Oceanography and Climate Science)

One of the world's foremost experts in how the world's oceans control regional and global climate on time scales from seasons to millennia—with his research spanning physical oceanography and climate dynamics, where he has written seminal papers on Southern Ocean water-mass formation, Antarctic ocean-atmosphere-ice interactions, climate modes of variability, and ocean ventilation processes. His research discoveries have a profound impact on human welfare, in Australia and other regions of the Southern Hemisphere, providing improved predictions of rainfall and climate variability, discoveries of the oceanic drivers of severe drought and flooding rains, and quantification of the impacts of climate change and the fate of ocean pollution.

2020



Scientia Professor RICHARD BRYANT AC (Psychology and Post-traumatic Stress Disorders)

Professor Richard Bryant AC FASSA FAA FAHMS of UNSW (Sydney) has made many seminal advances in the diagnosis, treatment, and identification of neural, genetic, and cognitive markers of post-traumatic psychopathology. His work has challenged the pre-existing notions of acute psychological response to trauma leading to major policy and practice shifts internationally in relation to how trauma survivors are managed. Professor Bryant has translated his findings into improving the mental health of communities throughout the Southern Hemisphere (as well as many trauma-affected countries in the northern hemisphere).

2021



Scientia Professor ROSE AMAL AC (Chemical Engineering and Catalysis)

Professor Rose Amal AC FRSN FTSE FAA of UNSW (Sydney) is an acknowledged international leader in the field of chemical engineering. Her research has changed the way in which the properties of catalysts are understood, with her scientific breakthroughs in catalysis leading to real-world applications for sustainable environment and energy applications. In particular, she is renowned for her photocatalysis breakthroughs for large-scale industrial water treatment and the generation of 'clean hydrogen', i.e., the production of hydrogen from water using solar energy powered by an electrolyser, including the generation of hydrogen directly from seawater. Her contributions to science and human welfare in and for the Southern Hemisphere have been extensive.

2022



Emeritus Professor John A Church AO (Climate Science)

Professor John A Church AO FAA FTSE FAMS FAGU of the Climate Change Research Centre, UNSW Sydney. Professor Church is the world's pre-eminent authority on the rate of 20th century sea-level rise, with his work on quantifying historical changes having been pivotal in revolutionising our modern view of sea level rise, including the first detection of the acceleration in the rate of rise. His ground-breaking papers, published with both national and international colleagues, explain a long-standing conundrum about the causes for the observed 20th century sea-level rise. He has provided substantial improvements in estimates of ocean heat uptake, resolving discrepancies between observations and models as well as the causes. In addition, he has been an international leader in sea level assessments and projections and his work has established that anthropogenic climate forcing is responsible for the majority of observed sea level rise since 1970.