

Gene Technology Technical Advisory Committee, 2017-2020

GTTAC Chair



John Rasko AO

BSc (Med), MBBS (Hons), PhD, MAICD, FFSc(RCPA), FRCPA, FRACP

Professor Rasko is an Australian pioneer in the application of adult stem cells and genetic therapy. He directs the Department of Cell and Molecular Therapies at Royal Prince Alfred Hospital and heads the Gene and Stem Cell Therapy Program at the Centenary Institute, University of Sydney.

John Rasko is a clinical hematologist, pathologist and scientist with a productive track record in gene and stem cell therapy, experimental haematology and molecular biology. In over 150 publications he has contributed to the understanding of stem cells and haemopoiesis, gene transfer technologies, oncogenesis, human aminoacidurias and non-coding RNAs.

He serves on Hospital, state and national bodies with contributions to scientific organisations include co-founding (2000) and past-President (2003-5) of the Australasian Cell & Gene Therapy Society; Vice President, International Society for Cellular Therapy (2008-12); founder (2009) ISCT-Australia/NZ; current President-Elect ISCT; Scientific Advisory Committees and Board member for philanthropic foundations; and several Ethics Committees. 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.

GTTAC Members



Graham Bonnett

Dr Graham Bonnett has been a research scientist with CSIRO since 1993. Prior to that he held a post-doctoral position at the University of Melbourne after finishing a PhD (in 1989) at the University of Leeds. He is currently a Research Director in CSIRO Agriculture and Food. His research expertise is in the physiology and development of crop plants and more recently the science underpinning the regulation of genetically modified sugarcane cultivars. In 2009 he was awarded a Queensland-Smithsonian Fellowship and spent 5 months in Panama (Smithsonian Tropical Research Institute) researching the reproductive biology of the weedy sugarcane relative *Saccharum spontaneum*. In 2013 he was appointed to the Independent Science Panel advising on the Reef Water Quality Protection Plan.



Orin Chisholm

BSc(Hons), GCULT, PhD

Dr Chisholm is the Program Director for Pharmaceutical Medicine and a senior lecturer at UNSW. Dr Chisholm began her career in basic research into the molecular biology of leukemia and haematopoiesis completing her PhD studies at CMRI. She then continued her research in both the USA and Australia. After 16 years in basic research she moved into the area of regulatory science, holding a number of positions in the pharmaceutical industry. She has spent the last 16 years working and lecturing in the areas of development and regulation of therapeutic and gene technology products and she has considerable expertise in the risk assessment of these products. At UNSW her research focus continues on the regulation of oncology, personalised medicine and biotechnology products in particular. She is also passionate about education in the areas of pharmaceutical medicine, personalised medicine and gene technology and teaches and conducts research on education in these areas.



Laura Fell

Laura Fell is a rural producer and businesswoman who owns and operates an intensive egg farming business in South Australia. She holds a Master of Business Administration from the University of South Australia, is a Fellow of the Australian Institute of Company Directors and of the Australian Rural Leadership Foundation. An experienced director in private and public sector boards, she is also a business management consultant, experienced in international trade in the agriculture, horticulture, aquaculture and energy sectors.

Laura is currently the Primary Producers SA (PPSA) livestock industry member of the South Australian Meat Food Safety Advisory Committee, Chair of Environmental Energy Australia Pty Ltd and of the Fleurieu Power Company Pty Ltd..



Tessa Gargett

BA. BSc(Hons) Phd(Medicine)

Dr. Gargett is an immunologist currently working at the Royal Adelaide Hospital. Her research interests include cell and gene therapies to treat chronic diseases and T cell biology. She is based at the Translational Oncology Laboratory (Centre for Cancer Biology) where she is the project manager for a Phase I Clinical Trial of Chimeric Antigen Receptor (CAR) T cell therapy in patients with advanced melanoma, in collaboration with researchers at the Baylor College of Medicine, Texas. She also performs basic research investigating CAR T cell biology and combination therapy approaches to treat solid tumours. She received her PhD in 2013 from the University of Adelaide for a project investigating T cell-targeted DNA vaccines for HIV. She is a member of the SA Pathology Institutional Biosafety Committee, the Australian Society for Immunology, and the American Association of Cancer Research and helps to run International Day of Immunology and Science in the Pub public events for her local community.



Richard Gordon

Dr. Gordon is a Senior Research Fellow based in The School of Biomedical Sciences (SBMS) at the University of Queensland (UQ). He leads a Michael J Fox Foundation funded research program on the role of chronic immune activation and neuroinflammation in neurodegenerative diseases. His research group also has a keen interest in using repurposed drugs as new therapies for neurodegeneration. Dr Gordon graduated with a PhD in Immunology and Toxicology in 2011 from Iowa State University and moved to Australia in 2012 to take up a full time research academic position at UQ.



John Hayball

Professor John Hayball is a molecular and cellular immunologist with fundamental interests understanding the processes that control immunological tolerance and immunity in different animal species ranging from the teleost fishes through to humans, with a particular interests in vaccinology and cancer immunotherapy.

His undergraduate training was in organic and biochemistry at the University of Adelaide (BSc 1987) and then worked in the biotech industry in Palo Alto California. He completed a PhD at Imperial College London (1994) and was supported on various postdoctoral fellowships at Imperial College, University of Adelaide, University of Western Australia and the Hanson Institute before his current academic appointment at the University of South Australia (2004). He heads the Experimental Therapeutics Laboratory (Sansom Institute, UniSA) and holds a tenured professorial academic appointment in the School of Pharmacy and Medical Sciences (UniSA). He has funding from the NHMRC and ARC and other national, state and institutional schemes and a long history of biotechnology industry engagement, including consultancies, scientific advisory board memberships, commercial research funding and funding from industry-leveraged federal government schemes.



Robert Henry

Robert Henry conducts research on the development of new and improved products from plants. He is Professor of Innovation in Agriculture and Director of the Queensland Alliance for Agriculture and Food Innovation, at the University of Queensland. His research targets improved understanding of the molecular basis of the quality of products produced from plants and genome analysis to capture novel genetic resources for diversification of food and energy crops. This research involves analysis of domesticated crops, wild relatives of crop species and potential new crop species. His research aims to define the basis of human selection for quality in food and non-food crops. Current research focuses on the major global food crops such as, rice, wheat and the leading current and potential energy crops, sugarcane and Eucalypts. He was previously Director of the Centre for Plant Conservation Genetics at Southern Cross University and Research Program Leader in the Queensland Agricultural Biotechnology Centre. He is a Fellow of the Royal Australian Chemical Institute and a Fellow of the Australian Academy of Technological Sciences and Engineering.



TJ Higgins AO

PhD, FAA, FTSE

TJ Higgins is a plant biotechnologist with background training in agricultural science. His research focus is the application of biotechnology for plant improvement. He is particularly interested in protecting food legumes from insect pests and enhancing the nutritional quality of plant products for feed and food uses.

Dr Higgins has contributed to our knowledge of seed protein biology, particularly in the way seed protein genes are regulated. That knowledge has led to the identification of genes for proteins that have special nutritive value and others that protect plants from certain pests.

He has served on State, National and International Advisory Committees including Chair of Scientific Advisory Committee at the Department of Biotechnology (Government of India) – Assam Agricultural University Biotechnology Centre, Jorhat, India, Director of the Cotton Research and Development Corporation, member of NSW Govt Agricultural Advisory Council on Gene Technology, member of

NSW Govt Ministerial Scientific Advisory Council, member of the Australian Federal Govt Dept Agric, Food and Forestry: Eminent Scientists Group and Director of Agricultural Biotechnology Council of Australia . He was Chairman of the Board of Gene Shears Pty Ltd. He is Vice President (Biol.) of the Australian Academy of Science.



Danny Llewellyn

Dr Danny Llewellyn is a Chief Research Scientist with CSIRO and a Fellow of the Australian Academy of Technology and Engineering, having been actively involved in plant biotechnology for over 35 years in the development, evaluation and deployment of GM traits primarily in cotton. Following a PhD in biochemistry and biophysics at the ANU he moved into the emerging area of plant genetic engineering at the Max Planck Institute in Cologne during the initial genesis of plant genetic modification and brought that technology back to Australia when taking up a postdoc with CSIRO to use transgenic plants for the first time to study basic aspects of plant gene regulation. He moved to cotton in the mid 1980's developing and/or testing GM traits mostly for insect and herbicide tolerance with various large multi-national life science companies. He pioneered the field testing of GM cotton in Australia working closely with CSIRO's cotton breeding team to deploy a number of those traits into full commercial production, ensuring the on-going sustainability of an industry worth billions to Australia. His research and close interaction with GMAC and later the OGTR helped to empirically define and validate the physical parameters required for the safe containment of GM traits in cotton during their field testing up to commercial release. He has received a number of Awards and honours in recognition of his services to Australian agriculture and the cotton industry. The commercial deployment of GM traits is on-going, but Dr Llewellyn also maintains an active research program in cotton genomics, marker-assisted breeding and the development of the next generation of GM traits to improve yield and quality of Australian cotton varieties.



Rebecca McCrackan

BSc (Hons), PhD, MIP, MAICD, FIPTA

Dr McCrackan is a Senior Intellectual Property Advisor, Patent and Trade Marks Attorney having previously worked as a biomedical research scientist. She is a Non-Executive Director of Epichem Pty Ltd, an Australian company which provides products and services in synthetic and medicinal chemistry to the drug discovery and pharmaceutical industries. Rebecca is also a member of the Advisory Board for the Curtin Health Innovation Research Institute.

Rebecca obtained a first class honours degree in biotechnology from Murdoch University and holds a PhD, undertaken at the Walter and Eliza Hall Institute of Medical Research. She performed her postdoctoral studies at the Spanish National Cancer Research Centre. Rebecca also holds a Masters in Intellectual Property; is a fellow of the Australian Institute of Patent and Trade Mark Attorneys; a member of the Australian Institute of Company Directors; and holds a position on the Western Australian regional committee for the Intellectual Property Society of Australia and New Zealand. Rebecca's intellectual property, business, research and development experience has led to a vocation specializing in technology development programmes, innovation management, strategy, risk, IP governance and compliance.



Michael Michael

Dr. Michael completed both his B.Sc. (Hons) and Ph.D. in genetics at the University of Melbourne. He was a founding scientist at one of Australia's first biotechnology companies, Florigene Pty Ltd (formerly Calgene Pacific Pty Ltd), where he worked in the company's post-harvest and colour modification programs. The use of co-suppression (RNA interference) in the generation of some Florigene products led to an interest in RNA-mediated gene silencing. Dr Michael is now a Laboratory Head in the Flinders Centre for Innovation in Cancer, Flinders Medical Centre, where he studies the altered gene expression that is associated with cancer progression. With an interest in the epigenetic regulation of cancer-associated genes, he has been a pioneer in studying the association between microRNAs and solid tumours.



Gabrielle O'Sullivan

BSc (Hons) PhD MPH (Hons)

Dr Gabrielle O'Sullivan is the Executive Officer of Royal Prince Alfred Hospital Institutional Biosafety Committee. She received her BSc in microbiology from University College Dublin and PhD in biochemistry/immunology from the London School of Hygiene & Tropical Medicine. Her post-doctoral research was at the University of Sydney in the area of cellular immunology, specifically focusing on Langerhans cells. She also received her Masters in Public Health from the University of Sydney and has made contributions to genetics and public health education, epidemiology, public health and to ethics and biosafety aspects of gene technology.



Jason Smythe

Associate Professor Jason Smythe has over 25 years research and senior management experience in the biotechnology sector in Australia and USA. He holds a B.Sc. (Hons) degree in Immunology from Monash University, a Ph.D. from The Walter and Eliza Hall Institute for Medical Research, and performed his postdoctoral studies as an NHMRC C.J. Martin Fellow at the National Institutes of Health in Bethesda (USA). Jason has held senior R&D Management positions at Johnson & Johnson; the Children's Medical Research Institute; CSIRO; and as Chief Scientific Officer at the Australian Tissue Engineering Centre Limited; Benitec Limited, and Horizon Science Pty Ltd. He has published over 30 manuscripts and numerous professional reports, been granted 5 patents and awarded 4 International Fellowships. He was an Editor of the Journal Expert Opinion on Biological Therapy for over 10 years and was a Member of numerous NHMRC Grants Review Panels. Jason also holds a Graduate Certificate in Change Management (Grad.Cert.Mgmt) from the AGSM and a Company Directors' Diploma from The Australian Institute of Company Directors. He is a Fellow of the Australian Institute of Company Directors (FAICD) and an Associate Fellow of the Australian Institute of Management (AFAIM). He has been a Director of several successful Biotechnology Companies and Professional Associations and has been a Member GTTAC since 2004.



Robert Sward

Dr Robert Sward, BSc (Hons), PhD, worked in the Victorian Department of Primary Industries (DPI) from 1980 to late 2012. Prior to that he held positions as: Post-doctoral Research Fellow at the University of Melbourne; Experimental Officer with the CSIRO Division of Horticulture; and Scientific Officer with DPI under a research contract with the International Potato Centre (CIP), Peru. The earlier part of his career focused on R&D in plant virology - a discipline that converged with crop biotechnology and incorporates many technical aspects of gene technology and related biosciences.

In more recent years, from early 2003 to late 2012, he managed the Biotechnology Policy portfolio within DPI which covered many aspects of government and industry policy in biotechnology and gene technology. As Manager Biotechnology Policy, he was involved in a broad range of gene technology topics and issues, including development of policies relating to the regulation and legislation of genetically modified (GM) crops in Victoria, as well as consulting and providing

comments on applications for dealings in GM organisms and GM products relevant to the agricultural and related industries. In other capacities, he was Executive Officer and member of DPI's Gene Technology Standing Committee; Chair and State representative on the Commonwealth Primary Industries Standing Committee's Industry Development Committee GM Taskforce; and Member of the AusBiotech National Agricultural, Environmental and Industrial Biotechnology Advisory Group.

Dr Sward currently works as a private consultant in his own company, BioBotanicals Consulting and is a cross-member with the Gene Technology Ethics and Community Consultative Committee (GTECCC). In 2013 he undertook the Review of Queensland's Gene Technology Act 2001 in collaboration with Foursight Associates.



Paul Young

Paul Young is Professor of Virology and Head of School, School of Chemistry & Molecular Biosciences at The University of Queensland, Brisbane, Australia. He is the current Vice-Chair of the Virology Division of the International Union of Microbiological Societies and has been the President of the Australian Society for Microbiology (2012-2014), the Australasian Virology Society (2001-2011) and the Asia-Pacific Society for Medical Virology (2012-2015). He gained his PhD from the London School of Hygiene & Tropical Medicine in 1986 where he began his research on the dengue viruses. He returned to Australia in 1989 to join the University of Queensland. His broader research agenda is aimed at understanding the molecular basis of virus induced disease, developing new and improved diagnostics as well as vaccine and therapeutic control strategies for a number of viral pathogens of both human and animal origin.