

**GROUP
OF EIGHT
AUSTRALIA**

COVID-19

OUR EXPERTS YOUR RESOURCE



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Introduction

As Group of Eight (Go8) Chief Executive I am exceptionally proud to be able to provide you with “COVID-19: Our experts – Your resource”. This document contains a list of experts under five headings – names provided to us by our eight world-leading research-intensive universities.

These Go8 researchers have the knowledge and expertise to assist all levels of Government, business, industry, social advocacy teams and media (to name but a few sectors) with their understanding of the

many different elements of the COVID-19 pandemic and the resulting economic issues.

On April 27 The Group of Eight (Go8) delivered to the Australian Federal Government the only evidence-based comprehensive advice on options for our nation’s leaders to use to move toward Australia’s COVID-19 exit and recovery phase. The report, “Roadmap to Recovery” is available at <https://go8.edu.au/research/roadmap-to-recovery>.

Its almost 200 pages provided two strategies that could be undertaken as we all await the arrival of successful treatments and a safeguard vaccine – Elimination or a Controlled Adaptation Strategy. It also included some 60 recommendations.



Its production was an intense project, using more than 100 Go8 experts and researchers who gave of their time willingly 24/7 for some three weeks, through weekends and even Easter

Much of the evidence-based information and recommendations in that report are being used by the Federal Government and by our jurisdictions.

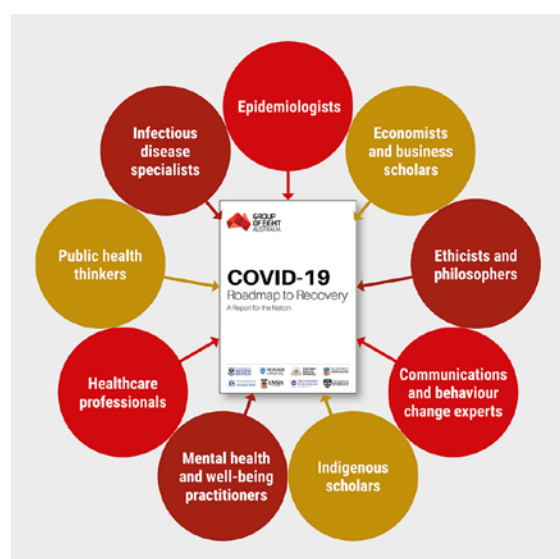
Its production was an intense project, using more than 100 Go8 experts and researchers who gave of their time willingly 24/7 for some three weeks, through weekends and even Easter. To them, to us, the Go8 providing the Government with the best possible advice in the world mattered. It was, as we all called it, a report for the nation.

These research areas used are set out below:

It also showed just what brilliance existed on the subject here, in Australia. We are indeed home to an amazing nation of research specialists. Each and every one of them unassuming, and determined to work as a cohesive team on behalf of the Australian community.

We may be at war, as our Federal Treasurer has said, with a faceless and flagless enemy, but we have the good fortune to have those named (and many more of a similar calibre) here to help us recover.

Please take the time to feel proud of Australia's Go8 researchers – we certainly are.



Vicki Thomson
Go8 Chief Executive

RESEARCHING

Researching the disease within the Go8 includes an incredibly wide range of world-leading specialist experts working in areas such as molecular virology and pathogenesis to epidemiology and population health and then also to other particular areas such as vulnerable communities and immune systems. The effort of leading the world in researching a global pandemic weighs heavily on the researchers whom Australia has taken for granted, but now can see with clarity are critical to our community's future health and wellbeing. Likewise a reliance on fundamental or basic research to Australia is highlighted, such as is needed to delve deeply into the genomic makeup or the protein biochemistry of the virus. Battling all aspects of COVID-19 is a "Team Australia" effort.



01

THE



DISEASE

1 Researching the Disease

Dr Jason Agostino¹

Research School of Population Health,
Australian National University

Expertise

Dr Agostino is a GP and epidemiologist who is a Medical Advisor to the National Aboriginal Community Controlled Health Organisation (NACCHO). He sits on the Aboriginal and Torres Strait Islander COVID-19 Advisory Group and the GP Peaks COVID-19 response Advisory Group. He assists in the co-ordination of the COVID-19 response and the generation of guidance for Aboriginal and Torres Strait Islander peoples.

Associate Professor Michael Beard²

Lead, Viral Pathogenesis Research Laboratory, School of Biological Sciences, University of Adelaide

Expertise

As Lead of the Viral Pathogenesis Research Laboratory (VPRL) at The University of Adelaide Associate Professor Beard has been continuously funded by the NHMRC for the past 18 years. His research interests include the molecular virology and pathogenesis of the hepatitis B and C virus (HBV, HCV) and other related viruses such as Dengue, West Nile Virus and more recently Zika virus (ZIKV). In particular his laboratory is interested in the innate immune response to viral infection and the host antiviral response through the expression of interferon stimulated genes (ISGs) and has identified a number of ISGs that control, HCV, HIV, Dengue and ZIKV. He uses model systems such as genetically modified mice and human organoid cultures to investigate

¹ <https://researchers.anu.edu.au/researchers/agostino-j?term=agostino>

² <https://researchers.adelaide.edu.au/profile/michael.beard>

viral pathogenesis. He currently collaborates with SA Pathology (Dr Chuan Lim, Dr Geoff Higgins) and Associate Professor Bastien Llamas to study sequence diversity in COVID-19 patient samples.

Professor Anthony Blakely³

Director, Population Interventions (PI) Unit, Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, University of Melbourne

Expertise

Professor Blakely is an epidemiologist and public health medicine specialist. Whilst principally an epidemiologist, he uses and combines methods from multiple disciplines: biostatistics, economics, econometrics, and computer and data science.

Associate Professor Marco Casarotto⁴

John Curtin School of Medical Research, Australian National University

Expertise

Associate Professor Casarotto has expertise in structural biology, medical biochemistry, pharmacology and pharmaceutical science. His work is on targeting ion channels found in coronavirus.

Dr Anna-Lise Chaber⁵

One Health Lecturer, Animal & Veterinary Sciences, University of Adelaide

Expertise

Dr Chaber is a field epidemiologist veterinarian who specializes on zoonotic and emerging diseases. Dr Chaber has conducted research on diseases transmission including MERS-CoV (Al Ain, UAE), and has expertise also in:

³ <https://findanexpert.unimelb.edu.au/profile/773939-tony-blakely>

⁴ <https://researchers.anu.edu.au/researchers/casarotto-mg>

⁵ <https://researchers.adelaide.edu.au/profile/anne-lise.chaber>

Chapter 1: Researching the Disease

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- Early warning and risk assessment
 - Epidemics & pandemics response including surveillance

Professor Tony Cunningham AO⁶

Director, Centre for Virus Research,
University of Sydney

Expertise

Professor Cunningham is an infectious diseases physician, clinical virologist and scientist, internationally renowned for his research on the immunobiology of HIV and herpes viruses, his work on vaccine and microbicide development, and as an antivirals expert.

His team also has made key contributions to human immunology and neurobiology of Herpes simplex virus (HSV), leading to the development and trialling by GSK of a partly successful candidate HSV vaccine and recently, a highly effective vaccine for Herpes zoster.

Professor Dominic Dwyer⁷

Director of the Centre for Infectious Diseases and Microbiology Laboratory Services, Institute of Clinical Pathology and Medical Research, Westmead Hospital, University of Sydney

Expertise

Professor Dwyer led the team of 10 scientists and pathologists at NSW Health Pathology's ICPMR and clinicians at the University of Sydney and Westmead Hospital on genome sequencing of the coronavirus and growing the live virus from real patients as opposed to using synthetic materials.

This helped to provide access to faster, reliable diagnostic testing for infected patients. The "virus isolates" were passed to the World Health Organisation and other scientists around the world for research and vaccine development.

⁶ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/tony-cunningham.html>

⁷ <https://www.pathology.health.nsw.gov.au/about-us/our-leadership-team/dominic-dwyer>

With coronavirus spreading in Australia, his team at Westmead Hospital and other labs across Sydney are working 24/7 on laboratory testing of swab samples and conducting contact tracing of infected patients to control the spread of the disease.

He is a medical virologist and infectious diseases physician with a clinical and research interest in viral diseases of public health importance. He runs a clinical trials unit in antiviral drugs and vaccines and has a particular interest in antiviral drug resistance. He has worked with the World Health Organisation on the SARS and avian flu outbreaks.

An important part of his role is assisting state and national governments in planning for pandemic influenza and emerging infections.

Dr John-Sebastian Eden⁸

Westmead Institute for Medical Research, University of Sydney

Expertise

Dr Eden was awarded funding from the CREID (NHMRC Centre of Research Excellence in Emerging Infectious Diseases) and APPRISE (Australian Partnership for Preparedness Research on Infection Disease Emergencies) in March 2020 for two COVID-19 projects:

- Deep sequencing to better understand the dynamics of within-host viral diversity during prolonged, severe SARS-CoV-2 infection to answer the question “What, if any, viral diversity accumulates during SARS-CoV-2 infection?”
- Diagnosis of COVID-19 (evaluation of nucleic acid testing and viral culture, in-house and commercial) with Jen Kok and David Smith to answer the question “Which nucleic acid test for SARS-CoV-2 is best?”

Potential interests and expertise include bioinformatics and genomics, viral genome sequencing and analysis.

⁸ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/js-eden.html>

Chapter 1: Researching the Disease

Dr Nicholas Eyre⁹

Lead, Molecular Virology Group (MVG), Biological Sciences, University of Adelaide

Expertise

Since completion of his PhD in 2007, Dr Eyre has worked as a full-time, grant-funded Molecular Virologist, specialising in molecular virology, virus-host interactions, high resolution imaging and antiviral drug screening and mechanistic analysis for pathogenic viruses including hepatitis C virus (HCV), dengue virus (DENV), Zika virus (ZIKV) and hepatitis B virus (HBV). His research interests include imaging-based analysis of the biogenesis and traffic of viral replication organelles, host dependency factors involved in viral replication cycles and high-throughput screening of candidate antiviral drugs and host dependency factors. Associate Professor Beard and Dr Eyre work closely together on several collaborative projects.

Professor Chris Goodnow¹⁰

Executive Director, Garvan Institute of Medical Research; Head of Immunogenomics laboratory; Director of the Cellular Genomics Futures Institute at UNSW Sydney, UNSW Sydney

Expertise

Professor Goodnow established the concept of multiple immune tolerance checkpoints, a framework now widely used in cancer treatment with “checkpoint inhibitors” and revealed the function of key genes in these checkpoints. He pioneered genome-wide analysis and more recently single cell DNA sequences controlling the immune system.

Relevant activities:

- Accelerated development of human antibodies raised to SARS-CoV as a treatment and preventive intervention for SARS-CoV-2 infection and COVID-19

⁹ <https://researchers.adelaide.edu.au/profile/nicholas.eyre>

¹⁰ <https://www.garvan.org.au/people/chrgoo>

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- Single cell RNAseq analysis to predict severe respiratory distress among those infected
 - Development of tools to characterise SARS-CoV-2 virus

Professor Eric Gowans¹¹

NHMRC Snr Research Fellow, Basil Hetzel Institute, University of Adelaide

Expertise

Professor Gowans has extensive expertise in the diagnosis of RNA virus infections, including hepatitis D virus (HDV), hepatitis C virus (HCV), Zika virus, bovine diarrhoea virus and GB virus-B. He has been involved in the design and development of diagnostic assays to detect viraemia by RT-polymerase chain reaction (RT-PCR) and serological evidence of infection by ELISA and other high throughput assays. The development of these assays including RT-PCR for HDV, HCV, Zika virus and GBV-B is based on a broad understanding of the molecular biology of these viruses, the function of the different viral proteins and the natural history

of virus infections in the human host.

Professor Gowans has extensive experience in the development of DNA vaccines and other vaccine strategies including adeno-associated virus (AAV) commonly used in gene therapy. The Gowans group developed novel DNA vaccines designed to elicit humoral and cell mediated immunity to HCV; these vaccines elicit neutralising antibody to the virus envelope proteins and cell mediated immunity to several of the non-structural (NS) proteins. The efficacy of the vaccines will be examined shortly in a collaboration with Chinese colleagues, in a non-human primate model.

The Gowans group also developed a novel vaccine for Zika virus and has extensive experience with other vaccine strategies including adenovirus vectors and more recently, AAV. The group's studies with AAV showed that a single dose with AAV-HCV NS5B elicited robust cell mediated immunity in mice forming the basis of a complementary approach to the established DNA vaccines.

¹¹ <https://researchers.adelaide.edu.au/profile/eric.gowans>

Chapter 1: Researching the Disease

Professor Darren Gray¹²

Research School of Population Health,
Australian National University

Expertise

Professor Gray is an infectious disease epidemiologist who is Deputy Director of the Research School of Population Health and Head of its Department of Global Health. His current research investigates the transmission and control of infectious diseases.

Professor Jane Heyworth¹³

Professor, Population and Public Health, University of Western Australia

Professor Heyworth is an environmental epidemiologist with over thirty years' experience in environmental health research, policy and practice. Professor Heyworth's specific research interests are in environmental causes of chronic illness and water quality and health.

Professor Heyworth participated in the Go8 expert process to provide advice to the Australian Government on 'social (physical) distancing'.

Professor Eddie Holmes¹⁴

Professor, ARC Laureate Fellow, School of Life Sciences, Faculty of Science; School of Medical Sciences, Faculty of Medicine and Health; Charles Perkins Centre; Marie Bashir Institute, University of Sydney

Expertise

Professor Holmes was part of the consortium led by Professor Yong-Zhen Zhang, Fudan University, which released the world's first genome sequence of the coronavirus on 10 January. The information was shared via GenBank as reported by Science and the release of the data helped researchers worldwide develop test kits and a vaccine for the virus. Their research "A new coronavirus associated with human respiratory

¹² <https://rsph.anu.edu.au/people/academics/professor-darren-gray>

¹³ <https://research-repository.uwa.edu.au/en/persons/jane-heyworth>

¹⁴ <https://www.sydney.edu.au/science/about/our-people/academic-staff/edward-holmes.html>

disease in China” was published in Nature on 3 February, confirming that the virus was most closely related to a SARS-like infection previously found in bats.

His research consortium includes Shanghai Public Health Clinical Center & School of Public Health, the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, all of which are key Chinese research institutions in tackling the coronavirus outbreak.

Professor Holmes is known for his work on the evolution and emergence of infectious diseases, particularly the mechanisms by which RNA viruses jump species to emerge in humans and other animals. He has studied the emergence and spread of such pathogens as avian influenza virus, dengue virus, HIV, hepatitis C virus, myxoma virus, RHDV and Yersinia pestis.

He is the Co-leader with Professor Guan Yi, leading SARs researcher at the University of Hong Kong of InnoHK collaboration, “AI-metagenomic platform to identify emerging pathogens”, funded by HK government. This aims to develop a platform for global detection of emerging pathogens and identification of the microbial basis of severe respiratory infections.

He is also a Guest Professor at the Chinese Center for Disease Control and Prevention (CDD), Beijing, and an Adjunct Professor at Fudan University, Shanghai.

Professor Tim Inglis¹⁵

Head of Division and Associate Professor, Faculty of Health and Medical Sciences, Pathology & Laboratory Medicine, University of Western Australia

Expertise

- Medical Microbiologist with a focus on tropical diseases at PathWest Laboratory Medicine WA, dealing with COVID-19

¹⁵ <https://research-repository.uwa.edu.au/en/persons/tim-inglis>

Chapter 1: Researching the Disease

Professor Tony Kelleher¹⁶

Director, The Kirby Institute;
Professor and Program Head,
Immunovirology and Pathogenesis
Program, UNSW Sydney

Expertise

Professor Kelleher's research interests concentrate on comparing the interaction between virus and the immune system in treated and untreated individuals with HIV-infection in an attempt to define protective immune responses with the objective of applying these observations to rational treatment and vaccine design. Established an exciting new area of research on transcriptional gene silencing of HIV-1 by siRNAs. Has developed and patented new methodologies for describing T-reg cells and antigen specific cells which are providing new insights into immunopathogenesis and vaccine design. These assays

will allow novel mapping of the mechanisms underlying the establishment and maintenance of the viral reservoirs which is the roadblock to curing this infection.

Relevant activities:

- Contributing to an adaptive trial design for severe disease in the NIH sponsored global International Network for Strategic Initiatives in Global HIV Trials (INSIGHT) network¹⁷
- Establishing a COVID-19 cohort across NSW hospitals (e.g. Westmead, POW, Blacktown, RPA, St George, St Vincent's, Childrens' Hospital Network), including substudies of vulnerable groups within cohort (e.g. transplant, immunodeficient/ immunosuppressed/ elderly/ comorbidities); enable real-time virus identification and viral load, develop tools for viral characterisation

¹⁶ <https://kirby.unsw.edu.au/people/professor-anthony-kelleher>

¹⁷ <http://insight.cabr.umn.edu/>

Professor Martyn Kirk¹⁸

Research School of Population
Health, Australian National University

Expertise

Professor Kirk worked for over twenty years in State, Territory and federal health departments in the areas of food, water and infectious diseases.

Previously, he ran the Australian Field Epidemiology Training Program – the Master of Philosophy in Applied Epidemiology (MAE) program – and the Australian network for foodborne disease investigation – OzFoodNet. Professor Kirk has consulted for the World Health Organization on gastrointestinal diseases and is a member of the WHO advisory body – the Foodborne Disease Epidemiology Reference Group.

Dr Ashnil Kumar¹⁹

School of Biomedical Engineering,
University of Sydney

Expertise

Dr Kumar's interests and expertise are how to design and develop decision support systems that enhance clinicians' decision-making capacity.

Associate Professor Bastien Llamas²⁰

ARC Future Fellow,
University of Adelaide

Expertise

Associate Professor Llamas is an ARC Future Fellow and a Group Leader at the Australian Centre for Ancient DNA. He completed his PhD in Molecular Biology in 2007 and has since become a specialist in the analysis of degraded and low quantity nucleic acids. He has received uninterrupted ARC funding since 2010 and was awarded three prestigious competitive research fellowships (Postdoctoral Fellowship of the Quebec Fund for Research on Nature

¹⁸ <https://researchers.anu.edu.au/researchers/kirk-md>

¹⁹ <https://www.sydney.edu.au/engineering/about/our-people/academic-staff/ashnil-kumar.html>

²⁰ <https://researchers.adelaide.edu.au/profile/bastien.llamas>

Chapter 1: Researching the Disease

and Technologies, Marie Skłodowska-Curie Individual Fellowship, ARC Future Fellowship). He uses his expertise in high-throughput DNA sequencing and bioinformatics to address outstanding questions in evolutionary biology related to microorganisms, animals, and humans. He currently collaborates with Associate Professor Michael Beard to study sequence diversity in COVID-19 patient samples.

Professor Tracy Merlin²¹

Director Adelaide Health Technology Assessment (AHTA), School of Public Health, Faculty of Health and Medical Sciences, University of Adelaide

Expertise

Professor Merlin has expertise in epidemiology and biostatistics, environmental and occupational health, policy and health services.

Professor Merlin leads a large and experienced team of researchers

undertaking multi-million dollar applied research and evaluation activities on behalf of government and non-government agencies. This research directly informs health policy and clinical practice.

Professor Greg Neely²²

School of Life and Environmental Sciences, University of Sydney

Expertise

Professor Neely is working on using animal and cell-based systems to study COVID infection on campus, in collaboration with Professor Philip Hansbro, Director of the Centre for Inflammation at UTS, an internationally recognised research leader in the study of respiratory diseases.

He has been running a lab since 2011 using functional genomics approaches to find novel human disease genes and pathways.

²¹ <https://researchers.adelaide.edu.au/profile/tracy.merlin>

²² <https://www.sydney.edu.au/science/about/our-people/academic-staff/greg-neely.html>

Associate Professor Peter Noble²³

Associate Professor, Faculty of
Science, School of Human Sciences,
University of Western Australia

Expertise

- Asthma and lung functioning
- Present research interests include the mechanisms and early life origins of obstructive airway disease including asthma and COPD, and the neonatal disorders, tracheobronchomalacia and bronchopulmonary dysplasia

Dr Matthew O'Sullivan²⁴

Centre for Infectious Diseases and
Microbiology, Westmead Hospital,
University of Sydney

Expertise

Dr O'Sullivan was awarded funding
from the NHMRC Centre of Research

Excellence in Emerging Infectious
Diseases (CREID) and Australian
Partnership for Preparedness
Research on Infection Disease
Emergencies (APPRISE) in March
2020 to his project "Serology of
Australian healthcare workers
caring for individuals exposed to or
diagnosed with COVID-19" to study
the risk to healthcare workers when
using personal protective equipment
and the prevalence of asymptomatic
infection and transmission.

Professor David Paterson^{25,26}

Director, University of Queensland
Centre for Clinical Research (UQCCR),
University of Queensland

Expertise

Professor David Paterson is leading a
team of Queensland researchers set
to begin clinical trials of a potential
treatment for COVID-19.

²³ <https://research-repository.uwa.edu.au/en/persons/peter-noble>

²⁴ <https://www.sydney.edu.au/research/opportunities/supervisors/1595>

²⁵ <http://researchers.uq.edu.au/researcher/1829>

²⁶ <https://clinical-research.centre.uq.edu.au/profile/260/david-paterson>

Chapter 1: Researching the Disease

His research focuses on the molecular and clinical epidemiology of infections with antibiotic resistant organisms, with the intent of translation of knowledge into optimal prevention and treatment of these infections.

Professor Paterson is Director at The University of Queensland Centre for Clinical Research and a Consultant Infectious Diseases Physician at the Royal Brisbane and Women's Hospital. He is Australia's most cited Infectious Diseases Physician and is the country's highest cited researcher in the field of Microbiology.

Related media:

- Centre for Clinical Research Article: *Researchers set to begin clinical trials on coronavirus cure*²⁷
- 3AW Interview: *Scientists working on promising treatments for coronavirus*²⁸

Mr Ross Roberts-Thomson

PhD Scholar, University of Adelaide

Expertise

Mr Roberts-Thomson focuses on optimisation of surgical timing in rheumatic mitral valve disease.

Associate Professor Linda Selvey²⁹

Associate Professor, School of Public Health, University of Queensland

Associate Professor Selvey is a health physician and her main research area is infectious disease. Her research interests are diverse including: climate change; *Clostridium difficile*, a bacterium that can cause severe diarrhea in vulnerable people; sexual health; blood borne viruses and antimicrobial resistance.

²⁷ <https://clinical-research.centre.uq.edu.au/article/2020/03/researchers-set-begin-clinical-trials-coronavirus-cure>

²⁸ <https://www.3aw.com.au/we-need-funding-to-get-moving-scientists-working-on-promising-treatments-for-coronavirus/>

²⁹ <https://public-health.uq.edu.au/profile/1608/linda-selvey>

Associate Professor Sanjaya Senanayake³⁰

ANU Medical School,
Australian National University

Expertise

Associate Professor Senanayake is an Infectious Diseases Physician and Director of Hospital in the Home at Canberra Hospital. He is a Lecturer at the Australian National University Medical School and is also a Conjoint Lecturer at the School of Public Health and Community Medicine, University of New South Wales.

Dr Kirsty Short

Australian Research Fellow, Senior Lecturer, School of Chemistry and Molecular Biosciences, Faculty of Science, University of Queensland

Expertise

Dr Short is head of the influenza virus pathogenesis laboratory at the University of Queensland, Australia.

Prior to current focus on COVID-19, Dr Short's research focused on pathogenesis of influenza virus, how influenza virus damages the lung during infection, why asthmatics are susceptible to severe influenza infections, and how influenza virus can trigger the development of asthma.

Related media:

- You Tube Video: *UQ's Dr Kirsty Short wants you to know the facts about COVID-19*³¹
- Vimeo: *Professor Ian Frazer AC and virologist Dr Kirsty Short answer your top 10 questions about COVID-19*³²

³⁰ <https://medicalschoool.anu.edu.au/people/academics/associate-professor-sanjaya-senanayake>

³¹ <https://www.youtube.com/watch?v=Z-bNLfEd6i0>

³² <https://vimeo.com/398435349>

Chapter 1: Researching the Disease

Professor Vitali Sintchenko³³

Director, Centre for Infectious Diseases and Microbiology (CIDM) Public Health; Faculty Member, The Westmead Institute for Medical Research & Marie Bashir Institute; Professor, Sydney Medical School, University of Sydney

Expertise

- Public health microbiologist and informatician who conducts research on biosurveillance of communicable diseases. His team is developing epidemiological tools to accurately predict the behaviour and modes of transmission of microbial pathogens and identify the source of disease outbreaks.

Professor Tania Sorrell

Professor of Clinical Infectious Diseases; Director of Marie Bashir Institute for Infectious Diseases and Biosecurity; Director of Centre for Infectious Diseases and Microbiology, Westmead Institute for Medical Research, University of Sydney

Expertise

- Pathogen genomics and biomarkers for diagnosis/prognosis; studies of infection to understand the natural history of COVID-19 including in different populations eg young, pregnant, elderly, immunosuppressed; development of antibody tests on serum; development of high throughput screening to test new drug compounds for activity in the laboratory.

Professor Stephen Turner

Professor Microbiology, Monash Biomedicine Discovery Institute, Monash University

Expertise

Professor Turner is a virologist/immunologist with expertise in immune function, vaccine design and respiratory viruses. His expertise covers virus-specific killer T cell differentiation, function and the establishment of immunological memory. He is currently co-ordinating

³³ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/vitali-sintchenko.html>

a new research collaboration (eight researchers, remainder named below) with infectious disease clinicians at Monash Medical Centre and the Alfred hospital to assess the immune parameters of COVID-19 infection.

Collaborators include:

- Professor Nicole La Gruta³⁴, Professor, ARC Future Fellow, Biochemistry & Molecular Biology, Monash Biomedicine Discovery Institute
- Professor Jamie Rossjohn³⁵, Professor & Australian Laureate, Biochemistry & Molecular Biology, Monash Biomedicine Discovery Institute
- Professor Tony Purcell³⁶, Professor (Research), Biochemistry & Molecular Biology, Monash Biomedicine Discovery Institute

- Professor Tony Korman³⁷, Adjunct Clinical Professor, Medicine Monash Health, Centre for Inflammatory Disease, Monash Health
- Dr Benjamin Rogers³⁸, Adjunct Clinical Professor, Medicine Monash Health, Centre for Inflammatory Disease, Monash Health
- Dr Samar Ojaimi³⁹, Adjunct Lecturer, Paediatrics Monash Health
- Dr Jim Buttery (Childrens' Hospital), Professor (Research)⁴⁰, Monash Centre for Health Research and Implementation

Dr James Walker

PhD Student, University of Adelaide

Expertise

Stochastic Epidemiology

³⁴ <https://research.monash.edu/en/persons/nicole-la-gruta>

³⁵ <https://research.monash.edu/en/persons/jamie-rossjohn-faa-fahms-flsw-fmedsci>

³⁶ <https://research.monash.edu/en/persons/anthony-purcell>

³⁷ <https://research.monash.edu/en/persons/tony-korman>

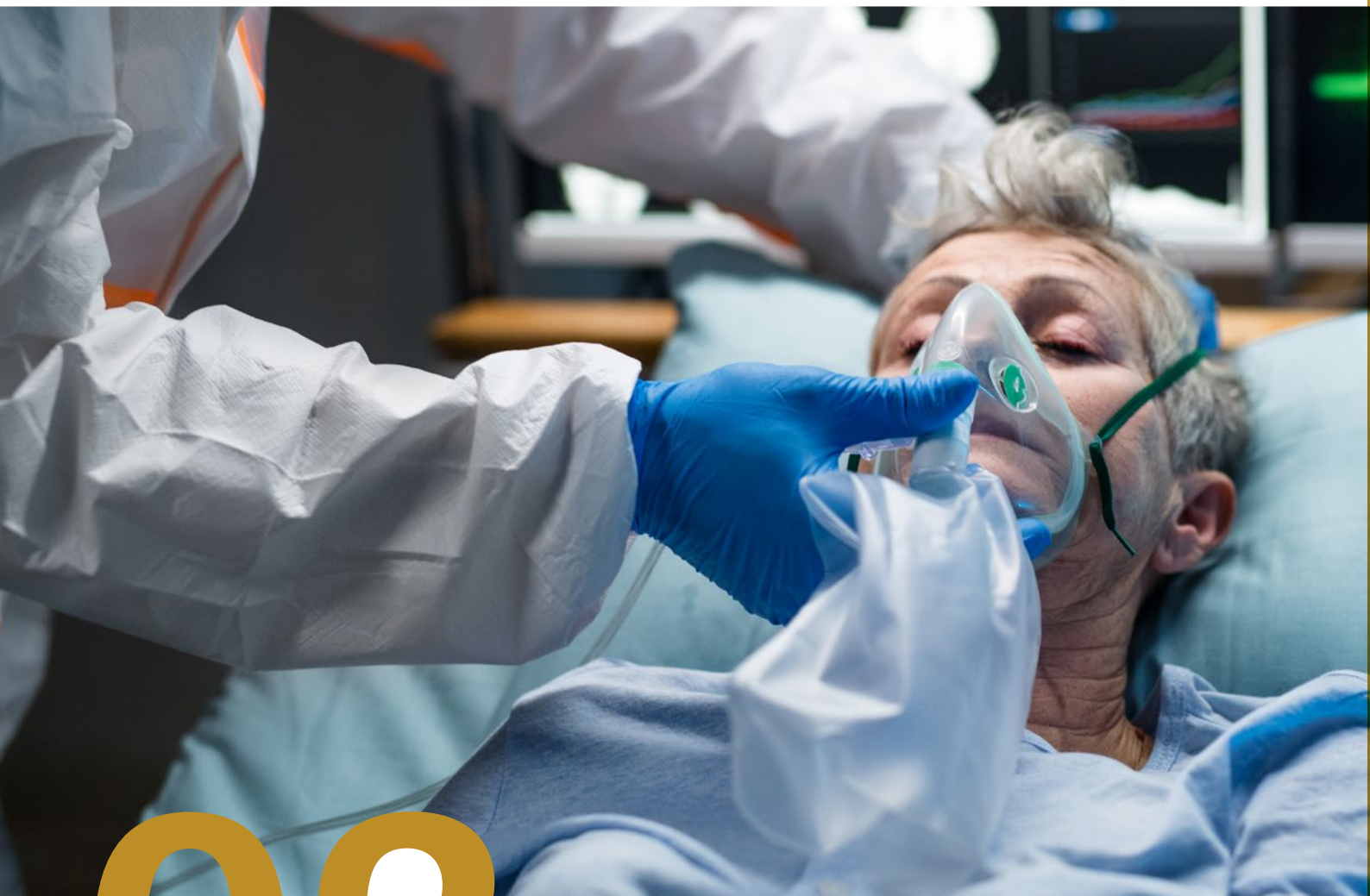
³⁸ <https://research.monash.edu/en/persons/benjamin-rogers>

³⁹ <https://research.monash.edu/en/persons/samar-ojaimi>

⁴⁰ <https://research.monash.edu/en/persons/jim-buttery>

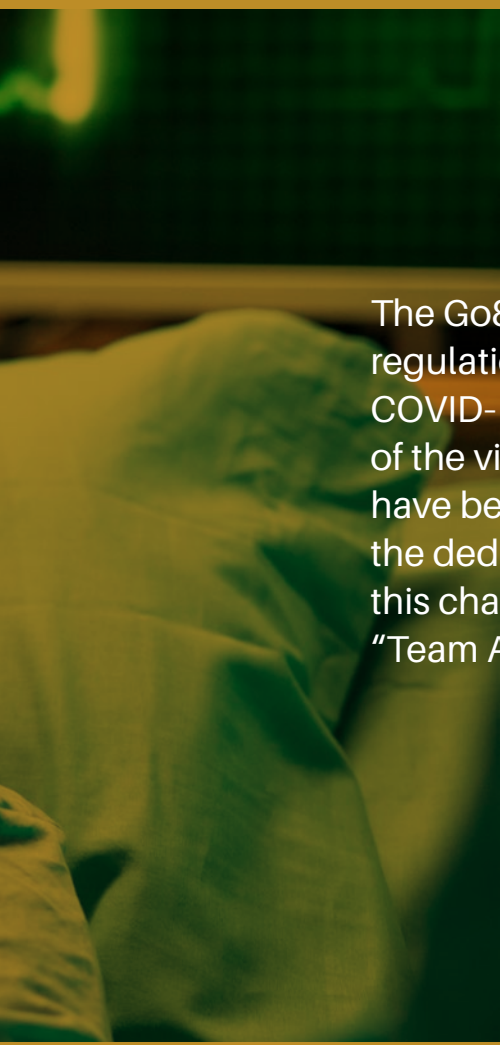
MANAGING OR

Managing or treating the disease as we develop a vaccine and drug treatments for COVID-19 has required the best of the best minds to consider how to keep the Australian community safer than others around the world, and maintain a continued high standard of safety, care, and response that the Federal Government and National Cabinet accept as the best way forward.



02

TREATING



The Go8 is proud of Australia's national safety regulations and requirements being used against COVID-19, aided through a sharper understanding of the virus, its effects and how it spreads. They have been achieved – in no small part – because of the dedicated commitment of our experts listed in this chapter. Battling all aspects of COVID-19 is a “Team Australia” effort.

THE DISEASE

2 Managing or Treating the Disease

Professor Emily Banks¹

Professor of Epidemiology and Public Health, Australian National University

Expertise

Professor Emily Banks is a public health physician and epidemiologist with interest and expertise in large scale cohort studies, pharmacoepidemiology, women's health, Aboriginal Health and healthy ageing. She currently leads the Epidemiology for Policy and Practice group at the National Centre for Epidemiology and Population Health. She is a Fellow of the Australian Academy of Health and Medical Sciences, Senior Advisor to the Sax Institute, Deputy Chair of the NHMRC Alcohol Working Group, Deputy Chair of the Heart Foundation Research Committee and a Visiting Professor at Oxford University. She chaired the Advisory Committee on the Safety of Medicines from 2010–2016. She was based in the UK from 1995–2003, where she was Deputy Director of the

Cancer Research UK Epidemiology Unit at the University of Oxford and joint Principal Investigator of the Million Women Study. Professor Banks' awards include: the UK Woman of Achievement in Science and Technology (2000); the ANU Vice-Chancellor's Awards for career achievement (2010), media engagement (2011 and 2016) and research translation (2011); the National Breast Cancer Foundation Patron's Award for services to breast cancer research (2014), the Medical Journal of Australia/MDA National Prize for Excellence in Medical Research (2015), AFR/Westpac 100 Women of Influence (2016); the ACT Heart Foundation's Women with Heart (2017); and Australian Citation for University Teaching (2017). The main emphasis of her work has been in using cohort study methodology to identify potentially modifiable factors affecting individual and population health in different settings and in quantifying their effects, to inform improvements in health and health care.

¹ <https://researchers.anu.edu.au/researchers/banks-e>

Associate Professor Margo Barr²

Centre for Primary Health Care and Equity, UNSW Sydney

Expertise

Associate Professor Barr is an epidemiologist with interest and expertise in large scale cohort studies, behaviour risk factor and disease surveillance, primary health care and welfare, and survey and data linkage methodology. She currently leads the Central and South Eastern Sydney Primary and Community Health Cohort/Linkage Resource (CES-P&CH) within the Centre for Primary Health Care and Equity.

Professor Peng Bi³

Professor, School of Public Health, University of Adelaide

Expertise

Dr Peng Bi is a Professor of Public Health at the University of Adelaide.

Professor Bi's main research areas cover infectious disease epidemiology, climate change and population health, public health risk communication and emergency public health events response. He has established a track record and publications in the field of communicable diseases, particularly those which are climate sensitive such as food borne diseases, mosquito borne diseases and rodent borne diseases.

Dr Andrew Black⁴

Lecturer in Applied Mathematics, School of Mathematical Sciences, University of Adelaide

Expertise

Dr Black has expertise in stochastic epidemiology applied to problems in biology. He is developing inference methods to assist pandemic preparedness and has undertaken research into quantifying the 1918 influenza pandemic.

² <https://research.unsw.edu.au/people/associate-professor-margo-barr>

³ <https://researchers.adelaide.edu.au/profile/peng.bi>

⁴ <https://www.adelaide.edu.au/directory/andrew.black>

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Dr Andrew Black^{5,6}

Director, Westmead Living Lab,
Office of the Vice-Chancellor
and Principal, University of Sydney

Expertise

Dr Black has expertise in building partnerships between the health sector, universities, community, government and industry to co-design and test solutions for challenges in health and wellbeing. He works on The Living Lab, an innovative project being developed by the University of Sydney as one of the Digital Health CRC's participants with partners in the precinct and the wider community, which aims to improve the patient journey through the health system, while also keeping people well and out of hospital. At the centre of this work is increasing the efficiency and effectiveness of healthcare, including through the greater personalisation of care.

Professor Patrick Brennan⁷

Professor of Medical Imaging,
School of Health Sciences,
University of Sydney

Expertise

Professor Brennan is the most published medical radiation scientist in the world with 450 published papers focussing on optimising disease detection. He is CEO of DetectED-X, a University of Sydney Start Up, which focuses on intelligent educational solutions.

His team has developed a free online radiology training and research platform available to diagnosing clinicians globally that could improve radiological detection of disease by 34 per cent and can contribute to improve diagnoses of COVID-19.

Their innovation COVID-19 CHEST
(Chest diagnosis: a High level

⁵ <https://www.digitalhealthcrc.com/better-together-living-lab-aims-to-boost-health-outcomes-in-western-sydney/>

⁶ <https://intersect.org.au/person/dr-andrew-black/>

⁷ <https://www.sydney.edu.au/medicine-health/schools/sydney-school-of-health-sciences/academic-staff/patrick-brennan.html>

Education SStrategy) provides a powerful, personalised free online radiology training and research platform available to diagnosing clinicians globally, 24/7. The proposed model is based on the highly successful international BREAST platform, created by the current team in 2010 at the University of Sydney and implemented across four continents. In 2019, the Australian Government commissioned the team to provide a similar solution for diagnosing dust disease. An AI companion is introduced to the platform to support decision-making with difficult cases.

This project will be delivered through a consortium involving DetectED-X, the University of Sydney, clinical experts and the leading medical imaging companies, GE Healthcare & Volpara, who will ensure global adoption of COVID-19 CHEST. DetectED-X has delivered similar platforms to screening programs

in Australasia and Europe and has already started development on COVID-19 CHEST. GE Healthcare has access to thousands of cases through their network in Wuhan, China, which they have agreed to release to this project.

Professor Jim Buttery⁸

Professor (Research),
Monash Centre for Health
Research and Implementation,
Monash University

Expertise

Professor Buttery's main research areas are vaccine safety, infectious diseases epidemiology, and clinical child health informatics. He serves as a member of the Strategic Priority Group of the WHO Global Vaccine Safety Initiative, for the Australian Medical Services Advisory Committee and the Advisory Committee on Vaccines of the Therapeutics Goods Administration.

⁸ <https://www.monash.edu/medicine/scs/researchers/jim-buttery>

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Professor Hak-Kim Chan⁹

Leader of Advanced Drug Delivery Group, School of Pharmacy, University of Sydney

Expertise

Professor Chan is a world leader in respiratory drug delivery, particularly pulmonary drug delivery via aerosols. He has developed a leading research program on aerosol drug delivery, ranging from in vitro, powder production by novel processes, particle engineering and aerosol formulation, to scintigraphic imaging of lung deposition and clinical outcome. He played a pivotal role in the development of Aridol™ (inhaled mannitol for diagnosis of asthma), which was approved by the FDA in the United States, 14 European Union countries, Singapore, Malaysia, South Korea, Australia and New Zealand.

Professor Allen Cheng¹⁰

Professor at the School of Public Health and Preventive Medicine at Monash University and is the Director of Infection Prevention and Healthcare Epidemiology and Professor in Infectious Diseases Epidemiology, Monash University

Expertise

Professor Cheng is an infectious diseases physician and is responsible for the prevention of healthcare associated infection at Alfred Health.

He is a Professor at the School of Public Health and Preventive Medicine at Monash University and is the Director of Infection Prevention and Healthcare Epidemiology and Professor in Infectious Diseases Epidemiology.

Professor Cheng's key interests are in influenza, antibiotic resistance,

⁹ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/kim-chan.html>

¹⁰ <https://research.monash.edu/en/persons/allen-cheng>

clinical infectious diseases and hospital-acquired infections. He is involved in influenza surveillance in Australian hospitals as well as clinical trials in infectious diseases and sits on several state and national government advisory committees for immunisation, surveillance and drug regulation.

He is modelling how COVID-19 may behave in Australia and how we can protect ourselves as well as patients. Professor Cheng is providing advice to government via the following mechanisms:

- invited expert, Australian Health Protection Principal Committee (AHPPC)
- invited expert, Communicable Diseases Network Australia (CDNA)
- invited expert infection Prevention Expert Advisory Group
- member, Victorian Health Service Pandemic Leadership Group

-
- member, Victorian Clinical Advisory Group

His research programs relevant to COVID 19 are:

- APPRISE Centre of Research Excellence, which focuses on informing Australia's response to infectious disease emergencies (Chief Investigator)
- NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID CRE) (Chief Investigator)
- Randomised, Embedded, Multi-factorial, Adaptive Platform Trial for Community-Acquired Pneumonia (REMAP CAP) as Chief Investigator, testing treatments in ICU patients
- FluCAN (The Influenza Complications Alert Network) in sentinel surveillance for COVID
- SPRINT SARI – ICU-based surveillance for COVID

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Associate Professor Kapil Chousalkar¹¹

Lead, Avian Disease Laboratory,
Animal & Veterinary Sciences,
University of Adelaide

Expertise

Associate Professor Chousalkar completed his Ph.D. and post-doctoral fellowship on avian coronavirus (also known as Infectious Bronchitis Virus – IBV) where he studied the cellular pathology of avian coronavirus. He also developed a cost-effective rapid diagnostic test for the detection of avian coronavirus from environmental samples. During his post-doctoral fellowship, he investigated the efficacy of avian coronavirus vaccines (live attenuated) against homologous and heterologous strains. He won two research grants from the Poultry industry for his work on avian coronavirus. His work on avian coronavirus vaccine has significantly changed the vaccination practices in the Australian poultry industry. He has published 11 research articles (ten

as the first author) and written one book chapter on avian coronavirus. He is a registered poultry veterinarian in South Australia and provides regular advice to his clients in the poultry industry on avian coronavirus vaccination, interpretation of flock antibody titer and flock immunity. Associate Professor Chousalkar has investigated several IBV outbreaks in poultry and backyard chickens and implemented prevention (biosecurity) protocols for controlling avian coronavirus outbreaks.

Relevant Publications
(Infectious Bronchitis virus
(Coronaviridae family)):

- <http://dx.doi.org/10.1016/B978-0-12-800879-9.00052-4>
- <http://dx.doi.org/10.1016/j.vaccine.2009.01.012>
- <http://dx.doi.org/10.1093/ps/86.1.50>
- <http://dx.doi.org/10.1071/EA08167>
- <http://dx.doi.org/10.3382/ps.2010-00685>

¹¹ <https://researchers.adelaide.edu.au/profile/kapil.chousalkar>

Associate Professor Wojciech Chrzanowski¹²

Vice President of Asian Federation
for Pharmaceutical Sciences,
University of Sydney

Expertise

Associate Professor Chrzanowski has expertise in nanomedicine, safety of nanomaterials, and efficient drug delivery. His laboratory develops a frontier cell- and exosome-based approach targeted at lung diseases. In the area of drug delivery, his work is centered on delivery systems that are capable of modulating drug uptake. The laboratory also applies a multifaceted system approach to examine material characteristic at nanoscale to gain a fundamental understanding of cellular responses and modulation.

Dr Nicholas Coatsworth

ANU Medical School,
Australian National University

Expertise

Dr Coatsworth is a consultant physician in infectious disease medicine at the Canberra Hospital with extensive experience in humanitarian and disaster relief. He also serves as a Commonwealth Deputy Chief Medical Officer¹³.

Professor Peter Collignon

ANU Medical School,
Australian National University

Expertise

Professor Collignon is active in many research and public health advocacy issues dealing with different infections and their risks. Particular interests are antibiotic resistance (especially in Staph), hospital acquired infections (especially blood stream and intravascular catheter infections) and resistance that develops through the use of antibiotics in animals. He is

¹² <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/wojciech-chrzanowski.html>

¹³ <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/government-response-to-the-covid-19-outbreak/our-medical-experts#dr-nick-coatsworth>

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extensively involved in Infection Control projects looking at procedures and current practices in medicine and how these may be improved to decrease the risks for patients acquiring infections.

Professor PJ Cullen¹⁴

School of Chemical and Biomolecular Engineering, University of Sydney

Expertise

Professor Cullen has developed plasma technology that has the potential to inactivate COVID-19 in air flows or on surfaces.

Ensuring virus free air is a critical component of prevention for infectious outbreaks, especially in populated spaces such as schools, childcare facilities and hospitals. High voltage plasma technology has the potential to inactivate COVID-19 in air flows or on surfaces. Professor Cullen's team have developed a plasma technology which can activate large volumes of atmospheric air

using a novel pin electrode design. The technology could be integrated into air ducts or as stand-alone room treatment unit technology. No chemicals, gases or dielectric materials are needed for our design and the energy used is low.

His team is planning to work with Chinese partners to test the efficacy of the design on the inactivation of the virus as both airborne particles and on material surfaces. The optimum control parameters are likely to depend on the plasma activation conditions including discharge frequency, duty cycle and discharge voltage.

He is a highly cited researcher and a leading expert in the research and development of cold plasma technologies and high-powered lasers for plasma biological application.

Professor Cullen is also the CEO of PlasmaLeap Technologies and Technology director for Innopharmalabs.

¹⁴ <https://www.sydney.edu.au/engineering/about/our-people/academic-staff/patrick-cullen.html>

Professor Kirsty Douglas¹⁵

ANU Medical School,
Australian National University

Expertise

Professor Douglas is Professor of General Practice at the ANU Medical School and Director of the Academic Unit of General Practice at ACT Health. In addition, she is currently President of the Australasian Association of Academic Primary Care. Her areas of expertise include:

- Primary Health Care
- Public Health and Health Services
- Aboriginal and Torres Strait Islander Health
- Health and Community Services
- Family Care

Professor Ian Frazer AC¹⁶

Faculty of Medicine, Affiliate
Professor Diamantina Institute,

Affiliate Professorial Research Fellow
Institute for Molecular Bioscience,
University of Queensland

Expertise

Professor Ian Frazer is a clinician scientist, trained as a clinical immunologist. As a professor at the University of Queensland, he leads a research group working at TRI in Brisbane, Australia on the immunobiology of epithelial cancers. He is recognised as co-inventor of the technology enabling the HPV vaccines, currently used worldwide to help prevent cervical cancer. He heads a biotechnology company, Jingang Medicine (Aus) Pty Ltd, working on new vaccine technologies, and is a board member of several companies and not for profit organisations. He was the inaugural president of the Australian Academy of Health and Medical Sciences and chairs the Australian Medical Research Advisory Board of the Medical Research Future Fund.

¹⁵ <https://researchers.anu.edu.au/researchers/douglas-ka?term=kirst+douglas>

¹⁶ <https://researchers.uq.edu.au/researcher/228>

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Recent media on COVID-19:

- *How can we protect ourselves?*¹⁷
UQ News (YouTube video)
24 March 2020
- *Renowned immunologist Professor Ian Frazer says coronavirus must 'run its course'*¹⁸ A Current Affair
9News March 2020
- *COVID-19: Know the facts*¹⁹
Ep. 2 UQ News (YouTube video)
6 April 2020
- *COVID-19: Know the facts*²⁰
Ep. 3 UQ News (YouTube video)
6 April 2020
- *COVID-19: The latest from science – Professor Ian Frazer?*²¹
Academy of Science 5 May 2020

Professor Marie Gerdtz^{22,23}

Head of Department, Nursing,
University of Melbourne

Expertise

Professor Gerdtz's clinical expertise is in emergency nursing where she worked as a Registered Nurse and clinical educator for 15 years. In her academic role she has experience working closely with health services in the development and implementation of curricula in specialty and advanced nursing practice to meet evolving workforce and population needs. Her research work focuses on emergency access, resource allocation, and clinical risk management.

17 <http://www.uq.edu.au/news/video/how-can-we-protect-ourselves>

18 <https://9now.nine.com.au/a-current-affair/coronavirus-professor-ian-frazer-immunologist-says--covid19-vaccine-a-while-away/7d2f6550-b683-4326-b612-483997d0f277>

19 <https://www.uq.edu.au/news/video/know-facts-episode-2>

20 <http://www.uq.edu.au/news/video/covid-19-know-facts-ep3>

21 <https://www.science.org.au/curious/people-medicine/covid-19-facts#c19frazer3>

22 <https://findanexpert.unimelb.edu.au/profile/3542-marie-gerdtz>

23 <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Implementation of this work is enhanced by the strong collaborative partnerships she has established within the health care industry and with government.

Dr Branka Grubor-Bauk²⁴

Virology Research Group, Adelaide Medical School, University of Adelaide

Expertise

Dr Grubor-Bauk has experience in developing novel vaccines against RNA viruses, namely hepatitis C and Zika virus and assessing their immunogenicity and protection in animal models. In the process of setting up a COVID-19 serology assays for research purposes, to assess antibody responses to SARS-CoV-2 (IgG1, IgG3, IgGM and IgGA) in clinical samples.

Expertise includes in:

- assessment of immune responses to vaccines and viral infections in small animal models and clinical PBMC samples

-
- assessment of viral loads in animal models of infection, with emphasis on evaluation of T cell responses to vaccination and infection
 - development of vaccines, antigens, serology and T cell assays to detect responses to infection and/or vaccination in humans and animal models

Dr Miranda Harris²⁵

Research School of Population Health, Australian National University

Expertise

Dr Miranda Harris is a medical doctor and an advanced trainee of the Australasian Faculty of Public Health Medicine (AFPHM). She will be working as a public health medicine registrar on the PFAS Health Study and The E-cigarette Public Health Assessment study. Previous roles have included working in communicable disease control and environmental health in the ACT Health Directorate and in medicine and medical device regulation at the Therapeutic Goods Administration.

²⁴ <https://researchers.adelaide.edu.au/profile/branka.grubor>

²⁵ <https://rsph.anu.edu.au/people/academics/dr-miranda-harris-0>

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Associate Professor Farhid Hemmatzadeh²⁶

Associate Professor in Virology,
School of Animal and Veterinary
Science, University of Adelaide

Expertise

Dr Hemmatzadeh's research is in the field of molecular epidemiology and test development for viral diseases in wide range of animals. He has focused on avian Influenza, Newcastle Disease, Bovine Viral Disease, Border Disease, Bovine leucosis and the Herpesviral infection in cattle, horses, and sheep.

Isaac Honor²⁷

Graduate, University of Sydney
Business School, University of Sydney

Expertise

Isaac Honor co-founded the company AusAir in 2017 through the University of Sydney's flagship Genesis Startup Program while studying at the

University's Business School. The company designed a reusable mask, which features a washable skin and botanical filters, passed preliminary P2 and KN95 testing and blocks over 97 per cent of fine particle matter often included in air quality reports. They are now looking for manufacturers which have filter media that scores well in terms of bacteria, virus, and particulate matter filtration.

Associate Professor Jun Huang²⁸

School of Chemical and Biomolecular
Engineering, University of Sydney

Expertise

Professor Jun Huang has developed a catalytic filter that can be used in combating coronavirus.

Professor Huang aims to copy the structures of nuclear acids and develop a similarly structured sensor to improve interaction with the nuclear acids of the virus, which will strongly

²⁶ <https://www.adelaide.edu.au/directory/farhid.hemmatzadeh>

²⁷ <https://www.sydney.edu.au/news-opinion/news/2020/02/18/sydney-graduates-launch-air-pollution-face-mask.html>

²⁸ <https://www.sydney.edu.au/engineering/about/our-people/academic-staff/jun-huang.html>

enhance the identification and sensitivity for coronavirus.

His team has also developed a catalytic filter to accumulate and kill coronavirus immediately. The filter can be used in ventilators or air-purifiers in the office, apartments, hotel, hospital, and airport; it can also be used in a reusable face mask.

Professor Jonathan Iredell²⁹

Director, Centre for Infectious Diseases and Microbiology, Westmead, University of Sydney

Expertise

Professor Iredell is an infectious diseases physician and clinical microbiologist specialising in critical infections and transmission of antibiotic resistance. His work aims to identify which patients admitted to ICUs are at highest risk, deliver this information early, and develop rapid diagnostic tests to assist intensive care specialists in making treatment decisions.

Scientia Professor John Kaldor³⁰

Professor and Program Head, Public Health Interventions Research Group, UNSW Sydney

Expertise

Professor Kaldor is an expert in disease control strategies for viral pathogens, including HIV, hepatitis and human papillomavirus, including monitoring infectious disease spread in the community and key subpopulations and in identifying risk factors for transmission and implementing intervention strategies.

His work has guided policy in disease control, particularly in relation to the prevention of HIV infection and other sexually transmitted infections, viral hepatitis and neglected tropical diseases.

Professor Kaldor has served on numerous policy and advisory committees in Australia and internationally and has had close working relationships with public health programs in a number of

²⁹ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/jonathan-iredell.html>

³⁰ <https://kirby.unsw.edu.au/people/scientia-professor-john-kaldor>

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countries of the Asia-Pacific region, particularly Cambodia, Indonesia, Papua New Guinea, Fiji and Solomon Islands. His relevant activities include:

- Monitoring spread in the community and in key populations
- Researching risk factors for COVID-19 infection in Health and Aged Care Workers
- Case series and case-control study of risk factors for COVID-19 among health care workers;
- Rapid serological assessment of virus exposure in key groups at risk of COVID-19
- Relevant media: Coronavirus research must focus on more than just a vaccine³¹

Associate Professor Veysel Kayser³²

School of Pharmacy,
University of Sydney

Expertise

Associate Professor Kayser works in the development of vaccines and biologics. He has collaborated with Novartis on antibody development, some of which are now on the market, having worked with the company on monoclonal antibodies from 2006 to 2012. He has also worked on the development of various vaccines (in collaboration with Sanofi-Pasteur since 2007).

He also develops novel methods and uses advanced computational tools so research aligns with development of new technology, products or applications. Associate Professor Kayser can develop new antibodies, vaccine, test kits and also understand viral protein structure in order to develop better antivirals.

Associate Professor Jinman Kim³³

Director of Visual TeleHealth Lab,
Faculty of Engineering,
University of Sydney

31 <https://www.smh.com.au/politics/federal/coronavirus-research-must-focus-on-more-than-just-a-vaccine-20200223-p543hz.html>

32 <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/veysel-kayser.html>

33 <https://arctcibe.org/chief-researchers/associate-professor-jinman-kim/>

Expertise

Associate Professor Kim has expertise in healthcare imaging. He leads the healthcare imaging part of InnoHK project, AI-assisted scalable data analytics for healthcare translation.

Charlee Jayne Law³⁴

Research School of Population Health,
Australian National University

Expertise

Charlee Law is an epidemiologist with an environmental health/public health background in local and international settings, including local and state governments, public health units and the World Health Organization. Her work has focused on enteric and zoonotic diseases, Aboriginal and Torres Strait Islander health, Pacific Islander health, program evaluation and public health responses in resource-limited environments.

Professor Julie Leask³⁵

Professor, Sydney Nursing School,
Faculty of Medicine and Health,

Adjunct Professor, School of
Public Health, Visiting Fellow,
National Centre for Immunisation
Research and Surveillance,
University of Sydney

Expertise

Professor Leask was awarded funding from the NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 to study community awareness, perceptions and behaviour about COVID-19, its prevention and management, and risk communication with Kerrie Wiley, Claire Hooker and Adam Dunn.

Professor Leask is a public health researcher focusing on vaccination and infectious disease risk communication. She is an advisor to the World Health Organization and was named overall and global category winner in the 2019 AFR 100 Women of Influence.

³⁴ <https://researchers.anu.edu.au/researchers/law-cx?term=charlee+law>

³⁵ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/julie-leask.html>

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Professor Karin Leder³⁶

Head of the Infectious Diseases Epidemiology Unit, Board of the International Society of Travel Medicine, Monash University School of Epidemiology and Preventive Medicine, Centre to Impact Antimicrobial Resistance, Monash University

Expertise

Professor Leder has expertise in travel medicine and epidemiology infectious disease. International travellers and immigrants play a key role in importing infections into Australia. Surveillance to understand changing trends in imported diseases is very important, as has been highlighted recently by the 2009 influenza pandemic. Travellers and immigrants face a variety of health risks, and research is also required to better understand risk factors for various infections, effective screening practices, and appropriate preventive measures that should be taken.

Professor Leder is providing advice via the following mechanisms:

- Invited to help with Cochrane reviews (with Julian Elliott)
- Linking with international sentinel surveillance
- Advising re local clinical guideline

Associate Professor Kamalini Lokuge OAM³⁷

Research School of Population Health, Australian National University

Expertise

An expert in public health responses to humanitarian crises, Dr Lokuge leads the Humanitarian Health Research Initiative at the Research School of Population Health, ANU. Her appointment follows previous positions as a doctor and medical epidemiologist for international health organisations including Médecins Sans Frontières (MSF/Doctors Without Borders), the World Health

³⁶ <https://research.monash.edu/en/persons/karin-leder>

³⁷ <https://researchers.anu.edu.au/researchers/lokuge-km>

Organisation, and the International Committee of the Red Cross. She was awarded a Medal of the Order of Australia for her work in 2010.

Dr Lokuge has provided medical care and epidemiological services over the last two decades in a range of humanitarian emergencies, including Guinea, Sierra Leone, Afghanistan, Darfur, Uganda, Nigeria, Myanmar, South Sudan, Zambia, Congo Brazzaville, the Democratic Republic of Congo, Papua New Guinea and Indonesia, giving her a unique perspective on implementation research priorities in such settings.

Professor Ben Marais³⁸

Westmead Children's Hospital;
Deputy Director, Marie Bashir Institute,
University of Sydney

Expertise

Professor Marais is a paediatrician and paediatric infectious diseases specialist with an interest in global health. He is internationally renowned

for his work on childhood and multi drug-resistant (MDR)-tuberculosis (TB).

His expertise is in genomics for diagnosis and monitoring; defining and testing optimal infection control practices; ongoing capacity building (training course/material) for rapid and effective response; use of social media for epidemic surveillance, public communication and tracking the "public mood"; and new surfaces.

Professor Helen Marshall³⁹

Medical Director, VIRTU and
Associate Professor Vaccinology,
University of Adelaide

Expertise

Professor Marshall is a clinician researcher and Medical Director of the Vaccinology and Immunology Research Trials Unit, Women's and Children's hospital. She leads a team of 20 clinical/scientist researchers and is an NHMRC Fellow in Vaccinology, in urgent infectious disease priorities.

³⁸ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/ben-marais.html>

³⁹ <https://researchers.adelaide.edu.au/profile/helen.marshall>

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Specific expertise is in/ draws on:

- Clinical trials of new vaccines (Phase 1–4) in all age groups, primarily paediatric vaccine trials, drawing on 18 years' experience in clinical trial research including vaccine and infectious diseases studies of new investigational vaccines and licensed vaccines for new indications
- Safety and immunogenicity study of the H1N1 influenza pandemic virus vaccine in children in 2009, to enable licensing of the vaccine by regulatory authorities in Australia and overseas. Professor Marshall can contribute to trialling of a SARS-CoV-2 vaccine in any age group, especially children and/ or protocol development for clinical vaccine trials
- Carriage studies including large population-based studies (all

adolescents in South Australia) assessing carriage of *Neisseria meningitidis*. Carriage continues in the Northern Territory in all 14–19 years old. Professor Marshall can include testing for SARS-CoV-2 in oropharyngeal swabs in those with a respiratory illness and those without⁴⁰

- Clinical trial and cohort study design. Development of protocols for population studies of infectious diseases and clinical trials of investigational and licensed vaccines. Professor Marshall can undertake serology studies to assess immune response to SARS-CoV-2 in health care workers, adults and children, currently being discussed
- Epidemiology of infectious diseases including risk factors for severe disease. Professor Marshall can provide expertise in infectious

⁴⁰ Professor Marshall has a grant application in progress to be submitted to assess incidence at a population level and describe carriage of and symptoms associated with SARS-CoV-2 and risk factors for infection

disease epidemiology, risk factors for disease severity, carriage and herd immunity. She is part of a paediatric network that will collect details of all paediatric cases admitted to hospital

- Social epidemiology and social science in pandemic preparedness including priorities for vaccination in a pandemic setting using qualitative and quantitative methodologies. Professor Marshall can undertake research in community response and attitudes to introduction of new vaccines and public health strategies during a pandemic. She previously conducted research during the H1N1 pandemic to assess priority groups for access to vaccine
- Assessment of vaccine submissions for inclusion of vaccines on the National Immunisation Program (Commonwealth Government)

Professor Marylouise McLaws⁴¹
School of Public Health and
Community Medicine, UNSW Sydney

Expertise

Professor McLaws is an expert in infection prevention and control, surveillance, hospital infection, outbreaks, and patient safety.

Professor McLaws is a member of the World Health Organization (WHO) Health Emergencies Program Experts Advisory Panel for Infection Prevention and Control Preparedness, Readiness and Response to COVID-19. For several years she was a short mission World Health Organization Advisor to China and Malaysia for surveillance development. She collaborated with Beijing to review the response to the Severe Acute Respiratory Syndrome (SARS) outbreak and healthcare worker safety for the Hong Kong SARS designated hospital.

⁴¹ <https://research.unsw.edu.au/people/professor-marylouise-mclaws>

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Professor Jodie McVernon⁴²

Professor and Director Of Doherty
Epidemiology, University of Melbourne

Expertise

Professor Jodie McVernon is a physician with subspecialty qualifications in public health and vaccinology. She has extensive expertise in clinical vaccine trials, epidemiologic studies and mathematical modelling of infectious diseases, gained at the University of Oxford, Health Protection Agency London and The University of Melbourne. She leads a nationally distributed National Health and Medical Research Council (NHMRC) Centre of Research Excellence in Infectious Diseases Modelling (www.prism.edu.au). Her unit's work on influenza and pertussis has been translated into national and international infectious diseases

policy through engagement with the Australian Government Office of Health Protection, the Australian Technical Advisory Group on Immunisation and World Health Organization.

Professor Anton Middelberg FTSE⁴³

Deputy Vice Chancellor and
Vice President (Research),
University of Adelaide

Expertise

Professor Middelberg is an internationally recognised research and thought leader in chemical and biomolecular engineering. His research is fundamental but directed toward significant problems including in the health and advanced biomanufacturing sectors. Professor Middelberg has researched, patented and licensed new technologies in the fields of rapid vaccine scale-up,

42 <https://findanexpert.unimelb.edu.au/profile/26586-jodie-mcvernon>

43 <https://www.adelaide.edu.au/directory/anton.middelberg>

soft-condensed matter and bio-nanotechnology. He received his ARC Federation Fellowship and then the State of Queensland Premier's Fellowship to enable his research on virus self-assembly to be directed toward biomanufacturing challenges associated with rapid viral vaccine manufacture and scale-up.

Professor Middelberg is an Associate Editor of the leading journal *Vaccine* and is the sole editor with global responsibility for all manuscripts submitted in the field of vaccine manufacture.

Associate Professor Julia Morphet⁴⁴

Director of Education for Nursing and Midwifery, Monash University

Expertise

Associate Professor Morphet is an Associate Professor and the Director

of Education in Nursing and Midwifery at Monash University. She has held key leadership roles in emergency nursing for the last decade, and was appointed as Executive Director of the College of Emergency Nursing Australasia (CENA), the peak professional body for Australian emergency nurses, in 2017. She works closely with other leaders in emergency care, guiding policy and strategic direction for emergency nursing and care in Australia.

Associate Professor Morphet leads two programs of research; the first focused on health workforce and education, and the second focused on patient experience in the emergency department, in particular, patient flow models. She chairs the CENA Research Committee and holds an honorary research appointment at Monash Health Emergency Departments.

⁴⁴ <https://www.monash.edu/medicine/nursing/about/staff/julia-morphet> and <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

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Professor Christine Phillips⁴⁵

Professor, Social Foundations of Medicine, College of Health and Medicine, Australian National University

Expertise

Professor Phillips is a general practitioner and health services researcher with interest and expertise in the health and health care of marginalised persons and populations, quality in health care and refugee and migrant health. She leads the Social Foundations of Medicine group at the ANU Medical School, where she instituted a curriculum integrating the social sciences across all four years and of medical education. Professor Phillips is Medical Director of Companion House Medical Service, the ACT's refugee health care service, and has over twenty-five years of clinical experience working in primary care

in the context of deep urban poverty, working in settings including drug and alcohol medicine, elder care, and prison health.

Associate Professor Charani Ranasinghe⁴⁶

John Curtin School of Medical Research, Australian National University

Expertise

Associate Professor Ranasinghe has expertise in infectious disease, cellular immunology and medical virology.

She is part of the University of Queensland (UQ) led Coalition for Epidemic Preparedness Innovations (CEPI), with one of the CEPI selected groups working on a coronavirus vaccine.

Dr Gabriella Scandurra⁴⁷

Children's Hospital, Westmead Clinical School, University of Sydney

⁴⁵ <https://researchers.anu.edu.au/researchers/phillips-cb>

⁴⁶ <https://researchers.anu.edu.au/researchers/ranasinghe-c?term=Charani+Ranasinghe>

⁴⁷ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/gabriella-scandurra.html>

Expertise

Dr Scandurra was awarded funding from the NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 for the project “biosecurity and biocontainment of high-consequence infections: Principles & practice”.

Professor Ramon Shaban⁴⁸

Clinical Chair, Infection Prevention and Disease Control, Marie Bashir Institute for Infectious Diseases & Biosecurity, University of Sydney

Expertise

As a credentialled expert infection control practitioner and emergency nurse, Professor Shaban’s inter-professional expertise in infectious diseases, infection control and

emergency care are the basis of a highly successful and integrated program of teaching, practice, and research. He is the immediate Past President of the Australasian College for Infection Prevention and a delegate member representative to the World Health Organization Global Outbreak and Response Network.

Professor Helen Skouteris⁴⁹

Monash Warwick Alliance Joint Professor of Healthcare Improvement and Implementation Science, Monash University

Expertise

As a Developmental Psychologist, Public Health and Implementation Science expert, Professor Skouteris works strategically with health, community service and early childhood education organisations across Australia to foster sector health and social care improvement

⁴⁸ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/ramon-shaban.html>

⁴⁹ <https://research.monash.edu/en/persons/helen-skouteris> and <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Chapter 2: Managing or Treating the Disease

that translates to better outcomes for children, young people, and families, especially for the most vulnerable and disadvantaged Australians. She is the Director of the newly funded NHMRC Centre of Research Excellence in Health in Preconception and Pregnancy.

Professor Skouteris focuses on establishing long term collaborative research and education and training programs in healthcare improvement and implementation science/health services research, such as healthy eating and active living program and reduction of maternal obesity.

Professor David Story⁵⁰

Foundation Chair of Anaesthesia, University of Melbourne; Deputy Director, Centre for Integrated Critical Care (CICC, Melbourne Medical School and Associate Director, Melbourne Academic Centre for Health (MACH), University of Melbourne

Expertise

Professor Story's main research interest is clinically and cost-effective approaches to reduce perioperative risk, complications, disability, and mortality.

Professor Story conducts two streams of research around perioperative care of high-risk patients.

The first clinical stream includes strategies to reduce complications, particularly in the postoperative period. The second translational stream examines acid-base disorders and the underlying pathophysiology.

Associate Professor Benjamin Tang⁵¹

School of Health Sciences, Nepean Clinical School, Westmead Institute, University of Sydney

50 <https://findanexpert.unimelb.edu.au/profile/3448-david-story>

51 <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/benjamin-tang.html>

Expertise

Professor Tang has spent 10 years researching why some otherwise healthy people develop severe complications when they get influenza.

He was awarded funding from the NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 for his project “Understanding host response of severe viral pneumonitis” to study whether there are indicators to predict COVID-19 progression to either mild or severe disease.

They found one type of immune cell, called neutrophils, was one of the main causes of patients deteriorating after they get influenza. They have already successfully used an AI and big data approach to develop an early warning system in patients with flu-like illness.

The project, the High-risk Influenza Screen Test (HIST) is the world’s first biomarker test to provide doctors with critically important information on a patient’s immune system responses to flu virus. The test needs a small drop of blood to read gene codes produced by immune system cells in response to the influenza virus, alerting doctors to individuals who are at risk of deterioration due to pneumonia and who need urgent medical treatment. It will play an important role in helping front-line doctors diagnose and treat high-risk individuals during flu epidemics or pandemics.

Dr Benjamin Tang is a critical care physician. He is head of the Genomic Research Group at Nepean Hospital. His team won the Health Research and Innovation prize in the 2017 NSW Health Awards.

Chapter 2: Managing or Treating the Disease

Professor Daniela Traini⁵²

Leader Respiratory Technology Group, Woolcock Institute, University of Sydney

Expertise

Professor Traini is an international leader in pulmonary drug delivery. She studies the design of new and better drug inhalation formulations and devices. This includes how drug delivery systems, particles or droplets, engineered for lung delivery, perform and how these systems can be manipulated to target specific pulmonary diseases.

Professor David Tschärke⁵³

John Curtin School of Medical Research, Australian National University

Expertise

Professor Tschärke's expertise is in virology, immunology, immunogenetics and infectious disease. He is working on the development of a viable vaccine candidate for COVID-19.

Professor Tim Usherwood⁵⁴

Professor General Practice, Westmead Clinical School, University of Sydney

Expertise

Professor Usherwood is Professor of General Practice at the University of Sydney; Head of the University's Westmead Clinical School; and Honorary Professorial Fellow at the George Institute for Global Health. Professor Usherwood is also Chair of the General Practice and Primary Care Committee of the Medicare Benefits Schedule (MBS) Review, and Deputy Chair of Western Sydney Primary Health Network.

52 <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/daniela-traini.html>

53 <https://researchers.anu.edu.au/researchers/tscharke-dc?term=david+tscharke>

54 <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/tim-usherwood.html>

He worked for 20 years as a general practitioner in community-controlled Aboriginal health.

His research focuses on the development and evaluation of interventions to improve health outcomes in primary care, with a particular focus on access to care and chronic disease.

Professor Steven Webb⁵⁵

Senior Staff Specialist in Intensive Care Medicine at Royal Perth Hospital and a Professor of Critical Care Research in the School of Public Health and Preventive Medicine at Monash University, Monash University

Expertise

Dr Webb's expertise includes pandemic preparedness, pneumonia, the long-term consequences of and recovery after critical illness, resuscitation and treatment of patients with septic

shock, and treatment of critically ill patients. He is a lead investigator of SPRINT-SARI (Short Period Incidence Study of Severe Acute Respiratory Infection) and REMAP-CAP (Randomised, Embedded, Multifactorial, Adaptive, Platform Trial of Community Acquired Pneumonia). He has particular interest in novel and more efficient trial methods including Platform Trials using Bayesian statistical methods and cluster-crossover trials as well as the interface between clinical trials and healthcare policy.

Dr Webb has been running a large-scale clinical trial on effectiveness of pneumonia treatments in Australian hospitals in response to viral infection, details below:

- Bending the Pandemic Curve: Improving Decision-Making With Clinical Research
<https://doi.org/10.1097/CCM.0000000000002912>⁵⁶

⁵⁵ <https://www.monash.edu/medicine/sphpm/about/staff/academic/webb>

⁵⁶ <https://insights.ovid.com/crossref?an=00003246-201803000-00014>

Chapter 2: Managing or Treating the Disease

Adjunct Professor Tarun Weeramanthri⁵⁷

Adjunct Professor, Faculty of Health and Medical Sciences, School of Population and Global Health, University of Western Australia

Expertise

Dr Weeramanthri has worked in health for 30 years, including most recently as Western Australia's Chief Health Officer, focusing on public health research, policy and practice in the prevention of common chronic diseases and addressing Aboriginal health gaps. He is also experienced in disaster coordination and response in the Northern Territory and Western Australia and worked for the World Health Organisation in 2015 to coordinate foreign medical teams in Sierra Leone. He has been awarded the Sidney Sax Medal by the Public Health Association of Australia in

2014 and is a joint specialty chief editor of the new international journal, *Frontiers in Public Health Policy*.

Dr Kerrie Wiley⁵⁸

Research Fellow, Public Health, School of Public Health, University of Sydney

Expertise

Dr Wiley was awarded funding from the NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 to study community awareness, perceptions and behaviour about COVID-19, its prevention and management, and risk communication with Julie Leask, Claire Hooker and Adam Dunn.

⁵⁷ <https://www.leadershipwa.org.au/spotlight-on-tarun-weeramanthri/> and <https://research-repository.uwa.edu.au/en/persons/tarun-weeramanthri>

⁵⁸ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/kerrie-wiley.html>

Professor Deborah Williamson⁵⁹

Professor/Director of Clinical microbiology at Royal Melbourne Hospital and Deputy Director of the Microbiology Diagnostics Unit at the Doherty Institute, University of Melbourne

Expertise

- Epidemiology/Modelling and Infectious Disease

Professor Williamson is a public health microbiologist involved in the delivery of specialist public health laboratory services, and in the diagnosis and surveillance of communicable diseases. Her research interests include the molecular epidemiology and pathogenesis of infections caused by antimicrobial resistant pathogens, and the translation of genomic technologies to questions of public

health importance. She is evaluating the role of rapid point of care PCR and antibody tests and how they could be used for a public health response in health care workers in the context of COVID.

Associate Professor James Wood⁶⁰

School of Public Health and Community Medicine, UNSW Sydney

Expertise

Involved in containment, Professor Wood focuses on the impact and cost-effectiveness of vaccines on epidemiology, along with research related disease elimination and parameter estimation (particularly for measles). He was previously quite involved in research in emerging infections (particularly planning for influenza pandemics).

⁵⁹ <https://findanexpert.unimelb.edu.au/profile/769110-deborah-williamson>

⁶⁰ <https://sphcm.med.unsw.edu.au/people/dr-james-wood>

Chapter 2: Managing or Treating the Disease

Professor Lin Ye⁶¹

Director, Centre for Advanced Materials Technology, University of Sydney

Expertise

Professor Lin Ye works in composites science and smart materials. He is interested in tackling the coronavirus challenges from the engineering side – protection equipment (clothes and masks with directional permeability for air and liquid flow, self-cleaning, washable etc.) based on his previous work.

Professor Paul Young⁶²

Professor, Head of School, School of Chemistry and Molecular Biosciences, Faculty of Science; Affiliate Professor, Australian Institute for Bioengineering and Nanotechnology; Affiliated Professor, Institute for Molecular Bioscience, University of Queensland

Expertise

Research expertise encompasses the molecular biology and immunopathology of viral infections. Currently conducting research to develop a vaccination for COVID-19 using molecular clamps technology.

Prior to conducting research relating to COVID-19 Professor Young's studies focussed on dengue virus, a serious mosquito-borne disease in many tropical countries, and Respiratory Syncytial Virus (RSV), a major cause of hospitalization of children with respiratory infections.

The primary goals of Professor Young's research are the development of vaccine and anti-viral strategies for the control of infections as well as a clearer understanding of the pathogenesis of severe disease.

61 <https://www.sydney.edu.au/engineering/about/our-people/academic-staff/lin-ye.html>

62 <https://researchers.uq.edu.au/researcher/241> and <https://scmb.uq.edu.au/profile/195/paul-young>

His projects involve the application of a range of techniques covering several disciplines including molecular biology, immunology, biotechnology, molecular cell biology, protein biochemistry and structural biology.

Related media:

- ABC News Alert: UQ researchers' vaccine is ready for animal trials⁶³
- ABC News YouTube Video: Australian researchers one step closer to coronavirus vaccine⁶⁴
- Sydney Morning Herald Article: Coronavirus outbreak: How the COVID-19 vaccine is being made⁶⁵

Associate Professor Ying Zhang⁶⁶

Sydney School of Public Health,
University of Sydney

Expertise

Associate Professor Ying Zhang is a senior epidemiologist with over 15 years' experience of conducting research on climate and health. Interests include capacity building for public health emergency preparedness and responses to climate crisis, which may include responding to emerging and re-emerging infectious diseases due to changing environment.

⁶³ <https://www.abc.net.au/news/2020-02-22/paul-young/11991496>

⁶⁴ <https://www.youtube.com/watch?v=I1hFzcTW8SI>

⁶⁵ <https://www.smh.com.au/national/coronavirus-outbreak-how-the-covid-19-vaccine-is-being-made-20200220-p542rh.html>

⁶⁶ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/ying-zhang.html>

ADDRESSING THE

Addressing the consequences of the disease is almost too much to bear. Yet our Go8 experts tackle each and every aspect of it with deep commitment and caring every day, looking for ways to alleviate the longer term suffering that everyone from the Prime Minister down knows is happening, and will keep happening for far longer than we wish to consider – from childhood and adult trauma, to continuing disease susceptibility, to our border management and the forever changing policy environment across most if not all sectors in our community. Go8 experts are extremely focused on understanding and resolving not only what we are enduring today but also the short and long term consequences. Battling all aspects of COVID-19 is a “Team Australia” effort.

03

CONSEQUENCES



OF THE DISEASE

3 Addressing the Consequences of the Disease

Professor Charles Abraham¹

Professor of Psychology,
University of Melbourne

Expertise

Professor Abraham is an applied social and health psychologist specialising in translational health research. His research focuses on the design, evaluation and implementation of interventions to change behaviour patterns, especially those designed to improve public health and health care effectiveness. He has led, and collaborated on, many multidisciplinary, cross-institutional and international research projects and his research has had both practice and policy impact. He has held scientific advisor positions with the UK Department of Health, the UK National Institute for Health and Care Excellence (NICE) and the UK House of Lords.

Professor Karen Adams²

Director of the Indigenous Unit
in the Faculty of Medicine,
Nursing and Health Sciences,
Monash University

Expertise

Professor Adams has a nursing background and worked in areas of aged care, communicable diseases and managing Aboriginal health services.

Associate Professor Eva Alisic³

Associate Professor, Child Trauma
and Recovery, University of Melbourne

Expertise

Associate Professor Alisic is an Associate Professor, Child Trauma and Recovery, and Associate Director at the Child Health and Wellbeing Program (School of Population and Global Health) at The University of

1 <https://findanexpert.unimelb.edu.au/profile/830731-charles-abraham>

2 <https://research.monash.edu/en/persons/karen-adams>

3 <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Melbourne. Her focus is on improving support for young people who have been exposed to traumatic events, such as family violence, car crashes, disaster, and war.

Dr Erik Baekkeskov⁴

Senior Lecturer in Public Policy,
University of Melbourne

Expertise

Dr Baekkeskov is a political scientist with expertise in public policy, especially factors shaping public policy-making. He has expertise in the area of epidemics and antimicrobial resistance and how the political response is shaped by different factors. He is interested in the role of trusted sources to tackle policy problems in this space. He has studied the H1N1 swine flu from a policy response perspective as well as China's political response to its health crises.

Professor Alison Bashford⁵

Research Professor in History and
Director of the New Earth Histories
Research Program, UNSW Sydney

Expertise

Professor Bashford is an expert on the history of Australian quarantine.

Associate Professor Christopher Blyth⁶

Associate Professor, Faculty of Health
and Medical Sciences, Paediatrics,
University of Western Australia

Expertise

Dr Blyth works in epidemiology, diagnosis, management and prevention of childhood infection with particularly focus on influenza, upper and lower respiratory tract infection, pneumonia, respiratory co-infection, emerging viral pathogens and vaccine safety. He was a participant in the Go8 expert meeting to provide advice on 'social (physical) distancing'.

⁴ <https://findanexpert.unimelb.edu.au/profile/768089-erik-baekkeskov>

⁵ <https://research.unsw.edu.au/people/professor-alison-bashford>

⁶ <https://research-repository.uwa.edu.au/en/persons/christopher-blyth>

Chapter 3: Addressing the Consequences of the Disease

Dr Wayne Boardman⁷

Senior Lecturer, School of
Animal and Veterinary Science,
University of Adelaide

Expertise

Dr Boardman is an expert in
veterinary epidemiology and
epi-/pandemics response and
surveillance.

He has worked as a zoo veterinarian,
including their endangered species
programs and has trained wildlife
veterinarians in wildlife medicine.
Dr Boardman has worked in New
Zealand, China and African countries
and managed the Zoological Society
of London's conservation programs.

He has been Senior Lecturer since
2014 and became a diplomate of
the European College of Zoological
Medicine in Wildlife Population
Health and European Registered
Veterinary Specialist in Zoological
Medicine (Wildlife Population Health).

Professor Robert Booy⁸

Professor of Child and
Adolescent Health, Westmead,
University of Sydney

Expertise

Professor Booy is an expert in
respiratory viruses.

His research interests cover the
genetic basis of susceptibility to,
and severity of, infectious diseases
especially influenza, RSV and invasive
disease caused by encapsulated
organisms; the clinical, public-
health and social burden of these
diseases; and means by which to
prevent or control serious infections
through vaccines, drugs and non-
pharmaceutical measures in both
children and adults.

Ms Katrina Boterhoven de Haan

PhD Scholar,
University of Western Australia

7 <https://researchers.adelaide.edu.au/profile/wayne.boardman>

8 <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/robert-booy.html>

Expertise

PhD student whose thesis is on post-traumatic stress disorder therapies.

Professor Alex Broom⁹

Professor of Sociology at the Department of Sociology and Social Policy, School of Social and Political Sciences, University of Sydney

Expertise

Professor Broom is an international leader in sociology, utilising highly innovative qualitative methodologies and social theory to provide novel understandings of the social, cultural, political and economic underpinnings of the key health challenges of the 21st Century.

Professor Broom is a leading expert on health care policy and social science node leader within Marie Bashir Institute of Infectious Diseases. Brings strong qualitative approaches to major health policy areas.

Professor Romola Bucks¹⁰

Professor, Faculty of Science, School of Psychological Science, University of Western Australia

Expertise

Professor Bucks has expertise in normal aging; degenerative conditions; and sleep psychology.

Professor Bucks' career spans 30 years in clinical psychology and academic practice, during which she has made a distinguished contribution to understanding of factors that contribute to healthy and abnormal ageing. She is internationally recognised for her work in healthy ageing and the diagnosis of cognitive decline/dementia, and for her expertise in the cognitive and mental health consequences of a number of key disorders of ageing, including obstructive sleep apnoea, type-2-diabetes, Alzheimer's and Parkinson's.

⁹ <https://www.sydney.edu.au/arts/news-and-events/news/2019/09/30/leading-health-sociologist-joins-faculty.html>

¹⁰ <https://research-repository.uwa.edu.au/en/persons/romola-bucks> and <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Chapter 3: Addressing the Consequences of the Disease

Professor

Peter Cameron¹¹

Academic Director of the Alfred Emergency and Trauma Centre, Monash University

Expertise

Professor Cameron co-ordinates Health services research, hospital readiness and preparedness.

He has published extensively on pandemic preparedness to coronaviruses (particularly relating to SARS), for example:

- The impending influenza pandemic: lessons from SARS for hospital practice, Medical Journal of Australia, Vol. 185, Issue 4¹²

Dr Charles Caraguel¹³

Senior Lecturer, School of Animal and Veterinary Science, University of Adelaide

Expertise

Dr Caraguel is an expert in veterinary public health, epi-/pan-demic response, prevention and Detection.

Emeritus Professor

Terry Carney¹⁴

The University of Sydney Law School, University of Sydney

Expertise

Professor Carney is an expert on legal and ethical preparedness for pandemic influenza.

Professor Kim Cornish¹⁵

Head of the Turner Institute, Monash University

Expertise

Professor Kim Cornish is a leading neuroscience researcher at Monash University and a Sir John Monash Distinguished Professor.

11 <https://research.monash.edu/en/persons/peter-cameron>

12 <https://www.mja.com.au/journal/2006/185/4/impending-influenza-pandemic-lessons-sars-hospital-practice>

13 <https://researchers.adelaide.edu.au/profile/charles.caraguel>

14 <https://www.sydney.edu.au/law/about/our-people/academic-staff/terry-carney.html>

15 <https://research.monash.edu/en/persons/kim-cornish> and <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Her research has identified key attentional signatures in childhood developmental disorders e.g. autism that have now been translated using pioneering digital technologies into attention interventions. She has a particular focus on the opportunity of the telehealth and digital technology disruption COVID-19 is bringing in and how this can be used to our advantage.

Professor Donna Cross¹⁶

Faculty of Medicine,
Dentistry and Health Sciences,
University of Western Australia;
Program Head, Education and
Development Team and Director,
Early Childhood Development
and Learning Collaboration,
Telethon Kids Institute

Expertise

Professor Cross' research has focused on improving child and adolescent, and their parents' and teachers' health and wellbeing. She has led more than 80 applied school and community-based research projects investigating ways to enhance pre-school children and school-age students' wellbeing and social and emotional development and reduce anti-social behaviour.

Ms Katrina Cummins

PhD Scholar, University of Adelaide

Expertise

Ms Cummins focuses in her PhD on The Nature of School Counselling Mental Health Services in Australia: A national school counselling model with professional standards and competencies to enhance student wellbeing and academic outcomes.

¹⁶ <https://research-repository.uwa.edu.au/en/persons/donna-cross>
<https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Chapter 3: Addressing the Consequences of the Disease

Professor Mark Dadds¹⁷

Professor of Clinical Psychology,
NHMRC Principal Research
Fellow, School of Psychology,
University of Sydney

Expertise

Professor Dadds is currently working with the media to disseminate helpful information for parents spending extended time in isolation with their children, to reduce the risk of family problems. He directs the Child Behaviour Research Clinic in the Brain and Mind Centre, and specialises in child and family mental health, especially parenting of children with behavioural and emotional problems.

Professor Patricia Dudgeon¹⁸

Professor, School of Indigenous
Studies, University of Western Australia

Expertise

Professor Patricia Dudgeon specialises in Indigenous mental health and psychology; Indigenous wellbeing and youth suicide.

Professor Sandra Eades¹⁹

Associate Dean (Indigenous),
Professor Centre for Epidemiology
and Biostatistics, Melbourne School
of Population and Global Health,
University of Melbourne

Expertise

Professor Sandra Eades is a leading Indigenous health researcher. Professor Eades research has focused on pediatric and perinatal epidemiology and the health of Aboriginal adolescents and young adults. She also leads research in primary care settings focused on testing health care interventions to improve Indigenous health.

Professor Eades is a Fellow of the Academy of Health and Medical Sciences and currently serves as a member of NHMRC Council. She was Australia's first Aboriginal medical doctor to be awarded a PhD, which investigated the causal pathways and determinants of health among Aboriginal infants in the first year of life.

¹⁷ <https://www.sydney.edu.au/science/about/our-people/academic-staff/mark-dadds.html>

¹⁸ <https://research-repository.uwa.edu.au/en/persons/patricia-dudgeon>

¹⁹ <https://mdhs.unimelb.edu.au/about/indigenous-development/sandra-eades>

Ms Nicole Ee²⁰

PhD candidate and Westpac
Future Leaders Scholar,
UNSW School of Psychology,
UNSW Sydney

Expertise

Nicole Ee's research seeks to understand the barriers and enablers to healthy ageing and social participation in the context of life course factors, societal expectations, infrastructure and public policy. She draws upon her experience in high-level evidence synthesis for global health policy development and is involved in community-based and national research projects focussed on understanding and optimising the experience of older adults in society. In 2019 she was awarded a Westpac Future Leaders Scholarship to undertake interdisciplinary research investigating the relationships between social engagement, wellbeing and cognitive health older adulthood.

Professor Sharon Friel²¹

Professor of Health Equity and
Director of the Menzies Centre
for Health Governance, School
of Regulation and Governance,
Australian National University

Expertise

Professor Friel is a social public health expert and can provide expert advice on the following:

- Social determinants of health, which means the effect of multisectoral public policy on health and health inequities. Specifically she has expertise in social protection measures, income, and planning policy and their effect on health inequities
- She is also an expert in food systems and food security, being able to guide actions relating to food availability, affordability and access
- A third area of expertise is in complex systems planning – whole of government responses

²⁰ <https://www.psy.unsw.edu.au/contacts-people/research-students/nicole-ee> and
<https://scholars.westpacgroup.com.au/Scholars/Profile?Id=3359>

²¹ <https://researchers.anu.edu.au/researchers/friel-s>

Chapter 3: Addressing the Consequences of the Disease

Dr John Gardner²²

Senior Research Fellow,
Sociology, Monash University

Expertise

Dr Gardner is a general practitioner and sociologist with expertise on the social and ethical dimensions of technology and innovation, and how hospitals can adapt.

Professor Jane Gunn²³

Inaugural Chair, Primary Care Research at The University of Melbourne, and Deputy Dean, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne

Expertise

Professor Gunn is an academic general practitioner and inaugural Chair of Primary Care Research at The University of Melbourne where she is also Deputy Dean of the Faculty of Medicine, Dentistry and

Health Sciences. Her leadership has raised the profile and rigour of primary care research in Australia and has been recognised via her election to the Australian Academy of Health and Medical Sciences. She has served two terms on the NHMRC Research Committee and established a successful mental health research program which has developed new models of care and influenced policy and practice. Her current work focusses on developing clinical prediction tools and utilising digital technologies to improve mental health care.

Dr Susan Hazel²⁴

Senior Lecturer, School of Animal and Veterinary Science, University of Adelaide

Expertise

Dr Hazel is an expert in veterinary public health and ethics.

²² <https://research.monash.edu/en/persons/john-gardner>

²³ <https://findanexpert.unimelb.edu.au/profile/14752-jane-gunn>

²⁴ <https://researchers.adelaide.edu.au/profile/susan.hazel>

Professor Ian Hickie AM²⁵

Co-Director, Health and Policy,
Brain and Mind Centre, NHMRC
Senior Principal Research Fellow,
University of Sydney

Expertise

Professor Hickie has been giving advice through various channels about dealing with anxiety during the COVID-19 crisis and safeguarding mental health during quarantine.

Professor Hickie is an internationally renowned researcher in clinical psychiatry, with particular reference to medical aspects of common mood disorders, depression and bipolar disorder in young people, early intervention, use of new and emerging technologies and suicide prevention.

Ms Anna Hickling²⁶

School of Psychology,
University of Queensland

Expertise

Anna Hickling is a provisional psychologist and PhD candidate in the concurrent Master of Clinical Psychology and Doctor of Philosophy program at The University of Queensland. She graduated with a Bachelor of Psychological Science (Hons I) in 2015, focusing on patient monitoring systems. Anna's PhD research investigates health behaviours and mental health outcomes in young adults with chronic health conditions such as diabetes. She is a clinician-researcher and draws upon her experience working in community and forensic mental health settings. Anna also gained interdisciplinary research skills as a participant in the 18-month UQ Global Change Scholars Program (2018–2019).

²⁵ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/ian-hickie.html>

²⁶ <https://graduate-school.uq.edu.au/profile/328/anna>

Chapter 3: Addressing the Consequences of the Disease

Professor Caroline Hunt²⁷

Head of the Clinical Psychology Unit;
Co-Chair of the Mental Well-Being
Working Group, Healthy Sydney;
Chair, Australian Psychology
Accreditation Council,
University of Sydney

Expertise

Professor Hunt is an expert
in the nature and treatment
of anxiety disorders.

She can provide advice on how
people might be experiencing
anxiety and worry, general
mental health issues arising from
quarantine or self-isolation, and
ways they can be managed.

Associate Professor Adam Kamradt-Scott²⁸

Faculty of Arts and Social Sciences,
University of Sydney

Expertise

Associate Professor Kamradt-
Scott specialises in global health
security and international relations.
His research and teaching explores
how governments and multilateral
organisations cooperate and interact
when adverse health events such as
disease outbreaks, epidemics and
pandemics occur, as well as how
they respond to emerging health
and security challenges.

Professor Shitij Kapur²⁹

Dean, Faculty of Medicine,
Dentistry and Health Sciences and
Assistant Vice-Chancellor (Health),
University of Melbourne

Expertise

Professor Kapur is a clinician-
scientist with expertise in psychiatry,
neuroscience and brain imaging.
Professor Kapur's main research
interest is in understanding
Schizophrenia and its treatment.

27 <https://www.sydney.edu.au/science/about/our-people/academic-staff/caroline-hunt.html>

28 <https://www.sydney.edu.au/arts/about/our-people/academic-staff/adam-kamradt-scott.html>

29 <https://findanexpert.unimelb.edu.au/profile/783336-shitij-kapur>

He has used brain imaging, animal models and clinical studies which have led to a better understanding of antipsychotic action, its relationship to brain dopamine receptor blockade, the role of appropriate dosing of these drugs and has led to the development of the 'salience' framework of psychosis and the 'early onset' hypothesis of antipsychotic action.

Professor Paul Kelly³⁰

ANU Medical School,
Australian National University

Expertise

Professor Paul Kelly is a public health physician, epidemiologist and health service executive. He is Commonwealth Deputy Chief Medical Officer, having previously been Chief Health Officer for the Australian Capital Territory and Deputy Director General of Population Health in the ACT Government Health Directorate. He is currently a member of the

Australian Health Protection Principal Committee and the National Health and Medical Research Council, and a founding partner of the Australian Prevention Partnership Centre. He is also a member of the Expert Advisory Group for the Australian Burden of Disease Study and of two World Health Organization Advisory Groups – International Health Regulations Roster of Experts and Nutritional Guidelines Advisory Group.

He has worked in research, health systems development, post-graduate teaching and as a health service executive including five years in the role of Director of the Masters of Applied Epidemiology Program at the National Centre for Epidemiology & Population Health at ANU, and nine years in the Northern Territory working as a Principle Research Fellow with the Menzies School of Health Research, as well as with the Centre for Disease Control in the NT Department of Health.

³⁰ <https://medicalschoool.anu.edu.au/people/academics/professor-paul-kelly>

Chapter 3: Addressing the Consequences of the Disease

Dr Elise Klein OAM³¹

Senior Lecturer,
Crawford School of Public Policy,
Australian National University

Expertise

Dr Klein's interests include the rise of therapeutic cultures in policies, neoliberal subjectivities, economic rights, and decoloniality. Dr Klein has held various roles including working on the UN Secretary General's High-Level Panel on Women's Economic Development and the Human Rights Committee within the United Nations General Assembly. She was awarded the Medal of the Order of Australia (OAM) in 2019.

Professor David Le Couteur AO³²

Professor of Geriatric Medicine
at the University of Sydney,
Scientific Director of the Ageing
and Alzheimers Institute (Concord
Hospital), Director of the Centre for

Education and Research on Ageing
(University of Sydney), Director of
the Biogerontology Laboratory of
the ANZAC Research Institute and
Senior Staff Specialist Physician
in Geriatric Medicine at the Concord
RG Hospital in Sydney

Expertise

Professor Le Couteur's research includes aging biology and geriatric clinical and experimental pharmacology and he has had extensive experience on Federal regulatory medicines committees. He is Editor in Chief of the Journal of Gerontology Biological Sciences and a Fellow of the Australian Academy of Health and Medical Sciences. In 2016 he was awarded an AO (Officer of the Order of Australia) for distinguished service to medicine as a clinical pharmacologist and geriatrician, particularly through a range of advisory roles and academic research activities.

31 <https://crawford.anu.edu.au/people/academic/elise-klein>

32 <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/david-lecouteur.html>

Professor Mu Li³³

Director of International Public Health at the Sydney School of Public Health, University of Sydney

Expertise

Professor Li conducted an online survey of more than 1800 pregnant women from 22 provinces in China in the early phase of the coronavirus epidemic. She found that accessing antenatal care information and services from official hospital accounts on the two major Chinese social media platforms was likely to reduce the risk and support the women's mental wellbeing.

Associate Professor Michelle McArthur³⁴

School of Animal and Veterinary Science, University of Adelaide

Expertise

Associate Professor McArthur has expertise in virology, virus

Sequencing, diagnosis-prognosis-treatment and vaccine development.

Professor Raina MacIntyre³⁵

Head, Biosecurity Program, and Professor of Global Biosecurity, Kirby Institute, UNSW Sydney

Expertise

Professor MacIntyre conducts research in epidemiology, vaccinology, health and clinical trials in infectious diseases. Has a particular interest in vulnerable and high risk populations, including immunosuppressed, health workers, first responders, migrants and refugees, and adult vaccination with a focus on the frail elderly. Research focus on the transmission dynamics and prevention of infectious diseases, particularly respiratory pathogens, underpinned by extensive field outbreak investigation experience.

³³ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/mu-li.html>

³⁴ <https://researchers.adelaide.edu.au/profile/michelle.mcarthur>

³⁵ <https://research.unsw.edu.au/people/professor-raina-macintyre>

Chapter 3: Addressing the Consequences of the Disease

Activities relevant to COVID-19 include:

- Extensive research on the use of risk-analysis methods for analysing emerging infectious diseases outbreaks such as Ebola and MERS-CoV which could be leveraged for analysing the current COVID-19 crisis
- Leads the NHMRC Centre for Research Excellence in Epidemic Response³⁶ which is international and multi-sectoral, and addresses gaps in global systems for epidemic response
- Modelling – Real-time answers to the impact of key interventions such as school closure, travel bans, contact tracing, quarantine, case isolation and vaccination on epidemic trajectory

Relevant publications:

- MacIntyre CR. On a knife's edge of a COVID-19 pandemic: is containment still possible? *Public Health Res Pract.* 2020 Mar 10;30(1). pii: 3012000. doi:
- Valentina Costantino, David James Heslop, Chandini Raina MacIntyre. The effectiveness of full and partial travel bans against COVID-19 spread in Australia for travellers from China³⁷. *MedRxiv* March 2020
- Chughtai AA; Stelzer-Braid S; Rawlinson W; Pontivivo G; Wang Q; Pan Y; Zhang D; Zhang Y; Li L; MacIntyre CR, 2019, 'Contamination by respiratory viruses on outer surface of medical masks used by hospital healthcare workers'³⁸, *BMC Infectious Diseases*, vol. 19
- Ralf Itzwerth, Aye Moa, C. Raina MacIntyre. Australia's influenza pandemic preparedness plans: an analysis³⁹ *J Public Health Pol* (2017)

36 <https://iser.med.unsw.edu.au/>

37 <https://doi.org/10.1101/2020.03.09.20032045>

38 <http://dx.doi.org/10.1186/s12879-019-4109-x>

39 <https://www.ncbi.nlm.nih.gov/pubmed/29176589>

Relevant media:

- Designing a low cost, re-usable face mask to prevent infection
- Are we ready for pandemics and antibiotic resistance?⁴⁰
- Building knowledge of biosecurity and bioterrorism threats⁴¹
- First Responder⁴²

Professor Patrick McGorry AO⁴³

Executive Director of Orygen,
Professor of Youth Mental Health,
University of Melbourne

Expertise

Professor Patrick McGorry is the
Executive Director of Orygen,
Professor of Youth Mental Health

at the University of Melbourne, and
a Founding Director of the National
Youth Mental Health Foundation
(headspace). He is a world-leading
researcher in the area of early
psychosis and youth mental health
and has been directly involved
in research and clinical care for
homeless people, refugees and
asylum seekers.

His work has played a critical role
in the development of safe, effective
treatments for and innovative
research into the needs of young
people with mental ill-health.

Professor McGorry was a key
architect of the headspace model
and has been successful in
advocating with colleagues for its
national and international expansion.

⁴⁰ <https://radio.abc.net.au/programitem/pgLGMMq05G?play=true>

⁴¹ <https://med.unsw.edu.au/news/building-knowledge-biosecurity-and-bioterrorism-threats>

⁴² <https://sphcm.med.unsw.edu.au/news/first-responder>

⁴³ <https://findanexpert.unimelb.edu.au/profile/14906-patrick-mcgorry>

Chapter 3: Addressing the Consequences of the Disease

Professor Sharon Naismith⁴⁴

NHMRC Dementia Leadership Fellow, School of Psychology, University of Sydney

Expertise

Professor Naismith can provide expertise in coping with stress and emotion in the pandemic.

Professor Naismith holds the Leonard P Ullman Chair in Psychology at Sydney. She also heads the Healthy Brain Ageing Program at the Brain and Mind Centre, a one-of-a-kind early intervention research clinic for dementia.

Professor Joel Negin⁴⁵

Professor and Head of School, Sydney School of Public Health, University of Sydney

Expertise

Professor Negin is an expert in the public health aspects of mental health and social isolation including the negative effects of a lack of social engagement.

Dr Torben Nielsen⁴⁶

Senior Lecturer, School of Animal and Veterinary Science, University of Adelaide

Expertise

Dr Nielsen has expertise in veterinary public health and ethics.

Professor Jane Pirkis⁴⁷

Professor of Mental Health, University of Melbourne

Expertise

Professor Pirkis has undertaken policy-relevant studies of suicide and suicide prevention in Australia, including profiling the epidemiology of suicide and suicidal behaviour among the general population and among at-risk groups.

44 <https://www.sydney.edu.au/science/about/our-people/academic-staff/sharon-naismith.html>

45 <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/joel-negin.html>

46 <https://researchers.adelaide.edu.au/profile/torben.nielsen>

47 <https://findanexpert.unimelb.edu.au/profile/637-jane-pirkis>

She has a research interest in suicide and the media. She has also undertaken several evaluations of large-scale suicide prevention programs and mental health care initiatives.

Associate Professor Simon Rosenbaum⁴⁸

Senior Research Fellow,
School of Psychiatry, UNSW
Faculty of Medicine, UNSW Sydney

Expertise

Associate Professor Rosenbaum is interested in the relationship between physical activity and mental health and the role of sport and exercise in improving outcomes for vulnerable populations including refugees. His research focuses on how exercise can be used to help people recover from mental illness including posttraumatic stress disorder, depression and anxiety. He is a highly cited researcher who works with a variety of groups including emergency service workers, contemporary veterans and refugees in both Australia and overseas.

Professor Sir John Savill⁴⁹

Executive Director of MACH,
University of Melbourne

Expertise

Professor Savill is the Executive Director of the Melbourne Academic Centre for Health (MACH), and in that capacity leads one of Australia's largest academic health partnerships. Prior to this he was Vice Principal and Head of the College of Medicine and Veterinary Medicine at the University of Edinburgh. Alongside this role, he was also Chief Scientist in the Scottish Government Health Directorates from 2008–2010 and Chief Executive at the Medical Research Council (MRC) from 2010–2018 in which he was central to national planning and implementation of health strategy. John brings unrivalled experience in linking academia to politics and policy.

⁴⁸ <https://research.unsw.edu.au/people/associate-professor-simon-rosenbaum>

⁴⁹ <https://findanexpert.unimelb.edu.au/profile/826026-john-savill>

Chapter 3: Addressing the Consequences of the Disease

Dr Theresa Scott⁵⁰

Lecturer in Clinical Geropsych,
School of Psychology, Faculty of
Health and Behavioural Sciences,
University of Queensland

Expertise

Dr Scott is a psychologist whose research focuses on older adults and Geropsychology. She holds an NHMRC-ARC Dementia Research Development Fellowship and has experience in research on functional outcomes for persons with dementia in communities and residential aged care. Theresa's NHMRC-ARC Dementia Research Development Fellowship focuses on the complex issues around dementia and driving.

Dr Scott's research to date has focused on ageing well programs, psychosocial interventions that support people with dementia and their carers, social and therapeutic horticulture to combat loneliness and depression for older people, clinical psychology

postgraduate training and continuing professional development programs.

Professor Louise Sharpe^{51,52}

Professor of Clinical Psychology,
School of Psychology,
University of Sydney

Expertise

Professor Sharpe is internationally known for her work in Health Psychology and has worked clinically with patients with a wide range of chronic physical problems, specialising in pain. She researches the interface between clinical and health psychology, so focuses on the development of clinically significant psychological problems and unhelpful health behaviours in people with a range of chronic health conditions, including multi-morbidity.

Professor Sharpe is interested in examining people's health-related anxieties in the context of COVID-19.

⁵⁰ <https://researchers.uq.edu.au/researcher/11436>

⁵¹ <https://www.sydney.edu.au/science/about/our-people/academic-staff/louise-sharpe.html>

⁵² <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Dr Joseph Smith

PhD student, University of Adelaide

Expertise

In his PhD, Dr Smith focuses on cognitive psychology and epistemological crisis.

Professor James Ward⁵³

Director, UQ Poche Centre, UQ
Poche Centre for Indigenous Health,
University of Queensland

Expertise

Professor Ward has a long history working in Aboriginal communities, including in men's health. He has held various roles in Aboriginal public health policy for both government and non-government organisations.

He has led national research projects in sexually transmissible infections and blood borne viruses, including issues surrounding injecting drug use. His work has influenced policy and practice significantly over the

last five years contributing to national guidelines, and policy and practice.

Professor Harvey Whiteford⁵⁴

Professor of Population
Mental Health, School of Public Health,
Faculty of Medicine,
University of Queensland

Professor Whiteford studies the burden of mental and substance use disorders in the population, and how to improve the health system to efficiently and equitably reduce that burden.

He leads the Policy and Epidemiology Group at the Queensland Centre for Mental Health Research which has a research program in psychiatric epidemiology, burden of disease, mental health policy analysis and the reform of mental health services.

Professor Whiteford has worked as a consultant to national governments, Commonwealth and State governments in Australia, the World Bank and the World Health Organisation.

⁵³ <https://researchers.uq.edu.au/researcher/25670>

⁵⁴ <https://researchers.uq.edu.au/researcher/865>

ADDRESSING

Addressing the socio-economic questions that arise from COVID-19 for Australia is something we are watching our politicians wrestle with daily.



SOCIO- ECONOMIC

Some of those questions are simply practical, others menacing, many could be endemic, too many need immediate or definitive resolution in the uncertain and fragile economic environment we find ourselves in for some time. A caring and financial safety net for those who are unavoidably impacted is part of who we are as Australians.



Ethics and ensuring continued adherence to our values of justice and fairness in changing and heightened circumstances are paramount considerations when dealing with domestic or family, business, educational, legal, human rights, migration, financial and many other aspects of the pandemic. Go8 experts in these areas, as in all areas related to COVID-19, are national and global leaders in their fields and this work is their primary focus. Battling all aspects of COVID-19 is a "Team Australia" effort.

QUESTIONS

4 Addressing Socio-economic Questions

Dr Kelly-Ann Allen¹

Senior Lecturer, Educational Psychology & Incl Education, Monash University

Expertise

Dr Allen is an Educational Psychologist with expertise in belonging and engagement. Nationally and internationally recognised for her research in the area of school belonging and for her translation of this expertise within educational contexts.

Professor Warwick Anderson²

Professor of History, University of Sydney

Expertise

Professor Anderson is an expert in the history of medicine and public health, with a special interest in Australasia, the Pacific, Southeast Asia and the United States. Leader of the Politics,

Governance and Ethics Theme for the Charles Perkins Centre.

Professor Lorana Bartels³

Criminology Program Leader, ANU Centre for Social Research and Methods, College of Arts and Social Sciences, Australian National University

Expertise

Professor Bartels works in access to justice, correctional theory, offender treatment and rehabilitation, courts and sentencing, criminal law and procedure, law and society and legal institutions.

She has been involved in calls⁴ by Australian lawyers and prisoner advocates for measures to reduce the nation's prison population – including releasing some inmates early and loosening conditions for bail – in the face of the coronavirus pandemic.

1 <https://research.monash.edu/en/persons/kelly-ann-allen>

2 <https://www.sydney.edu.au/arts/about/our-people/academic-staff/warwick-anderson.html>

3 <https://researchers.anu.edu.au/researchers/bartels-l?term=bartels>

4 <https://www.abc.net.au/news/2020-03-20/calls-for-australian-prisoners-to-be-released-due-to-coronavirus/12074182>

Professor Sharon Bessell⁵

Director of Gender
Equity and Diversity,
Australian National University

Expertise

Professor Bessell's research interests revolve around two broad areas. The first is social policy, social justice and the human rights of children, particularly children's participation and citizenship, quality education, child labour, child protection, and support for children without parental care. The second area of Sharon's work is the gendered and generational dimensions of poverty. Sharon's work has spanned Australia, Southeast Asia, the Pacific and Southern Africa, working with government, NGO's and international agencies. Professor Bessell is able to provide advice on the welfare policy-

related aspects of the COVID-19 response, particularly as they pertain to child and poverty-related policy.

Professor Nick Biddle⁶

Associate Director, ANU
Centre for Social Research
and Methods, ANU College
of Arts and Social Sciences,
Australian National University

Expertise

Professor Biddle has expertise in migration, population trends and policies, econometric and statistical methods, aboriginal and torres strait islander policy, public policy, education policy, urban and regional economics, labour economics, studies of Aboriginal And Torres Strait Islander society, applied economics, experimental economics, and economics of education.

5 <https://crawford.anu.edu.au/people/academic/sharon-bessell>

6 <https://researchers.anu.edu.au/researchers/biddle-ng?term=biddle>

Chapter 4: Addressing Socio-economic Questions

Professor Robert Breunig⁷

Professor and Director,
Tax and Transfer Policy Institute,
Australian National University

Expertise

Professor Breunig's research is motivated by important social policy issues and debates, working regularly with the Department of Treasury, the Department of Employment, the Department of Industry, the Department of Communication and the Arts, the Productivity Commission, the Australian Bureau of Statistics, the ACT Treasury Department as well as many other agencies. He has been a consultant to the private sector on marketing, mergers, bank competition and customer loyalty programs. Professor Breunig is able to provide advice on the tax and social policy-related aspects of the COVID-19 response, particularly as it relates to long-term economic recovery.

He is one of Australia's leading Public Policy Economists. He has published in over 50 international academic journals in economics and public policy. He has made significant policy impact through a number of his research projects: the relationship between child care and women's labour supply; the effect of immigration to Australia on the labour market prospects of Australians; the effect of switching to cash from food stamps in the U.S. food stamp program and the inter-generational transmission of disadvantage.

Dr Katherine Carroll⁸

Research Fellow, College of Arts
and Social Science, Australian
National University

Expertise

Dr Carroll has helped pioneer the Video Reflexive Ethnography (VRE) methodology in a variety of hospitals in Australia and the USA. She has worked in collaborative research

7 <https://crawford.anu.edu.au/people/academic/robert-breunig>

8 <https://researchers.anu.edu.au/researchers/carroll-ke>

partnerships with health professionals in the high-technology, ethically charged spaces of the neonatal intensive care unit, adult intensive care, surgery, surgical pathology, and the emergency department. She has published extensively on the VRE methodology, including a co-authored book, *Visualising Health Care Practice Improvement* (2013, Radcliffe) and guest-edited a special issue on using video methods in health care research (2009 *International Journal of Multiple Research Approaches*, vol3, Issue 3).

Professor Alex Collie⁹

Director, Insurance Work and Health Research Group, School of Public Health and Preventive Medicine and an Australian Research Council Future Fellow, Monash University

Expertise

Professor Collie is an applied public health and social policy researcher, focusing on work disability benefit

and compensation systems and their impact on the work, social and health outcomes of injured and ill people. He has advised multiple state and commonwealth government departments and private sector organisations on workplace health, insurance and injury compensation.

Professor Rae Cooper AO¹⁰

Professor of Gender, Work and Employment Relations, University of Sydney

Expertise

Professor Cooper has expertise in business and business recovery, gender and future of work. She brings an important gender lens on business recovery policy and employment policy, training and development. In 2019 she was made an officer of the Order of Australia for her contributions to 'higher education and to workplace policy and practice'.

⁹ <https://research.monash.edu/en/persons/alex-collie>

¹⁰ <https://www.sydney.edu.au/business/about/our-people/academic-staff/rae-cooper.html>

Chapter 4: Addressing Socio-economic Questions

Dr Kyllie Cripps¹¹

Senior Lecturer, UNSW
Faculty of Law, UNSW Sydney

Expertise

Dr Cripps works in Indigenous family violence, Indigenous sexual assault, Indigenous child abuse, Indigenous women's issues, Indigenous health and Indigenous related policy.

Dr Cripps is interested in the safety and wellbeing of Indigenous families and communities and her research focuses on how this can be achieved when family violence and child abuse is taking place in the home. Through her research, she has been particularly concerned with the experiences of Indigenous women and children, and through her research aims to elevate their experiences and stories to engender support (familial, community and institutional) that can effectively empower individuals, families and communities to self-determine their futures free from violence.

Professor Megan Davis¹²

Pro Vice-Chancellor Indigenous;
Professor of Law, UNSW Sydney

Expertise

Professor Davis works in Aboriginal and Torres Strait Islanders constitutional, international, and human rights Law; and politics and community services.

Professor Davis' current research focuses on constitutional design, democratic theory and Indigenous peoples, she has been the leading constitutional lawyer working on Indigenous constitutional reform since 2011. Her Australian and international policy experience includes being appointed by the PM to the Referendum Council, designing the deliberative constitutional dialogue process the Council undertook (2015); being appointed to the PM's Expert Panel on the Recognition of Aboriginal

11 <https://www.law.unsw.edu.au/staff/kyllie-cripps>

12 <https://research.unsw.edu.au/people/professor-megan-jane-davis>

and Torres Strait Islander Peoples in the Constitution (2011). Professor Davis currently serves as a United Nations expert with the UN Human Rights Council's Expert Mechanism on the rights of Indigenous peoples. She is former UN Fellow of the UN Office of the High Commissioner for Human Rights in Geneva.

Professor Angus Dawson¹³

Professor of Bioethics and
Director, Sydney Health Ethics,
School of Public Health,
University of Sydney

Expertise

Professor Dawson studies the ethics of restrictive measures in a global context. What are the relevant ethical issues? How should we balance different considerations? What are the implications for future policy and legal reform?

Professor Dawson is part of the NHMRC funded Centre for Research Excellence 'Australian Partnership for Preparedness Research on Infectious Disease Emergencies' (APPRISE). They are researching the relevant ethical issues relating to global infectious disease risks, including prioritising vaccines and how to conduct research during emergencies.

Dr Christopher Degeling¹⁴

School of Public Health,
Sydney Medical School,
University of Sydney

Expertise

Dr Degeling has expertise in ethics and politics of human interactions with animals, and the social and cultural dimensions of public health. His inter-disciplinary research draws together insights from Science and Technology Studies (STS) and social and normative theories.

¹³ <https://www.sydney.edu.au/medicine-health/about/our-people/academic-staff/angus-dawson.html>

¹⁴ <https://www.sydney.edu.au/environment-institute/person/dr-christopher-degeling/>

Chapter 4: Addressing Socio-economic Questions

Associate Professor Ben Edwards¹⁵

Associate Professor, Child and Youth Development and Longitudinal Studies
ANU College of Arts and Social Sciences, Australian National University

Expertise

Associate Professor Edwards has expertise in developmental psychology and ageing, psychological methodology, design and analysis, family and household studies, early childhood education and social policy.

He is focused on policy relevant research on child and youth development and advising and supporting longitudinal studies. He is an expert in longitudinal studies of child and youth development, linkage of administrative data to surveys and longitudinal studies of disadvantaged groups such as refugees.

Associate Professor Edwards has undertaken consultancies for the OECD, the Australian Government Departments of Prime Minister and

Cabinet, Social Services, Education, the New South Wales Departments of Premier and Cabinet, Families and Community Services as well as the Benevolent Society and the Smith Family.

Professor Nicholas Evans¹⁶

Distinguished Professor,
Department of Linguistics,
School of Culture, History & Language; ARC Laureate Fellow;
Director, ARC Centre of Excellence for the Dynamics of Language,
Australian National University

Expertise

Professor Evans' central focus is the diversity of human language and what this can tell us about the nature of language, culture, deep history, and the possibilities of the human mind. He has carried out fieldwork on several languages of Australia and Papua New Guinea, publishing grammars of Kayardild (1995) and Bininj Gun-wok (2003),

¹⁵ <https://researchers.anu.edu.au/researchers/edwards-b?term=ben+edwards>

¹⁶ <https://researchers.anu.edu.au/researchers/evans-nrd?term=nicholas+evans>

and dictionaries of Kayardild (1992) and Dalabon (2004), and has spent around seven years living in remote communities, learning and recording their languages, and relating this to broader issues including Native Title, vernacular literacy, and indigenous art and music. Two larger research projects are an ARC Laureate Project on 'The Wellsprings of Linguistic Diversity', which integrates typological and variationist studies across a number of small-scale multilingual speech communities in indigenous Australia, PNG and the Pacific, and the ARC Centre of Excellence for the Dynamics of Language.

The ARC Centre of Excellence for the Dynamics of Language (CoEDL), CoEDL, in working on a range of Indigenous and minority languages, has the capability to assist in getting translated/interpreted versions of COVID-19 related information out to a wider audience. This could help demonstrate why it is important for information to flow out through many lesser-spoken languages,

oral or written or both. Since some translation services exist (e.g. in the Northern Territory), CoEDL could assist in checking for each language what was going on a language by language basis.

Professor Jane Fisher¹⁷

Professor of Global Health, Director of Global and Women's Health and Head, Division of Social Sciences in Public Health and Preventive Medicine, Monash University

Expertise

Professor Fisher is an academic Clinical and Health Psychologist with longstanding interests in the social determinants of health, and healthcare participation. She has completed major epidemiological studies in clinical and community settings in Australia, Vietnam and Nepal, nationally funded intervention trials. She is an expert technical adviser to WHO, UNICEF and the United Nations.

¹⁷ <https://research.monash.edu/en/persons/jane-fisher>

Chapter 4: Addressing Socio-economic Questions

Professor Kevin Fox¹⁸

Professor and Director of Centre for Applied Economic Research (CAER), UNSW Sydney

Expertise

Professor Fox has served in many policy and advisory roles including as Advisor to the Australian Treasury (appointed in 2016,) Chair of the 16th Series CPI Review Advisory Group in 2009–2010, and member of the Expert Working Group of the Australian Council of Learned Academies on productivity 2012–2014 that reported to the Prime Minister’s Science, Engineering and Innovation Council. He is Fellow of the Society for Economic Measurement, a Member of the NBER-affiliated U.S. Conference in Research on Income and Wealth. He is also a member of the Australian Bureau of Statistics Methodology Advisory Committee and the Productivity Measurement Reference Group.

Professor John Freebairn AO^{19,20}

Ritchie Chair of Economics, University of Melbourne

Expertise

Professor Freebairn is an expert in business recovery, applied microeconomics and policy analysis. He was honoured in 2018 as an Officer of the Order of Australia for his service to education in the field of applied economics and his rich contribution to public policy over the course of his career.

Over the course of his career, Professor Freebairn has been deeply involved in taxation reform, having served as an advisor to former treasury secretary Ken Henry’s tax review. He has also been actively involved in progressing how economics is taught – contributing to curriculum development and heading up the department at the University of Melbourne multiple times.

18 <https://www.business.unsw.edu.au/our-people/kevinfox>

19 <https://fbe.unimelb.edu.au/our-people/staff/economics/john-freebairn>

20 <https://fbe.unimelb.edu.au/newsroom/professor-john-freebairn-awarded-ao-for-achievements-in-economics>

Professor Ross Garnaut AC²¹

Professorial Fellow Economics,
University of Melbourne

Expertise

Professor Garnaut is an economist whose career has been built around the analysis of and practice of policy connected to development, economic policy and international relations in Australia, Asia and the Pacific.

Professor Garnaut is the author of numerous publications in scholarly journals on international economics, public finance and economic development, particularly in relation to East Asia and the Southwest Pacific. Recent books include *The Great Crash of 2008* (with David Llewellyn-Smith, 2009); *Dog Days: Australia After the Boom* (2013); *Forty Years of Reform and Development in China* (2018) and *Superpower: Australia's low carbon opportunity* (2019). He is

Distinguished Fellow of the Australian Economic Society, Distinguished Fellow of the Australian Agricultural and Resources Economic Society, Fellow of the Australia Academy of Social Sciences and Honorary Professor of the Chinese Academy of Social Sciences.

Professor Matthew Gray²²

Director ANU Centre for Social Research and Methods ANU
College of Arts and Social Sciences,
Australian National University

Expertise

Professor Gray works in public policy, labour economics, studies of Aboriginal and Torres Strait Islander society, social policy, and applied economics.

He has published research on a wide range of social and economic policy issues including those related to Indigenous Australians. He has

²¹ <https://www.rossgarnaut.com.au/>; <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

²² <https://researchers.anu.edu.au/researchers/gray-mc>

Chapter 4: Addressing Socio-economic Questions

expertise in work and family issues, labour economics, social capital and social inclusion, measuring wellbeing, the economic consequences of divorce, child support, and social and economic policy development. He has undertaken extensive work on economic policy issues involving Indigenous Australians, including health status, labour market outcomes, poverty and the CDEP scheme.

Professor Len Gray²³

Director UQ Centre for Health Services Research (CHSR),
Faculty of Medicine,
University of Queensland

Expertise

Professor Gray is co-chair of the Medical Research Future Fund (MRFF) Aged Care Mission. His research interests focus on aged care policy, models of aged care service delivery, assessment and care planning systems, and in recent years, e-health and telemedicine strategies.

Over the course of his career, his research has influenced the design and operation of hospital, community and institutional aged care in Australia. He has contributed to the evolution of telehealth in Queensland and Australia. He has been a major contributor to the development of assessment systems internationally through the interRAI research collaborative, particularly with the hospital sector.

Professor Keith Hill²⁴

Director of the Monash Rehabilitation Ageing and Independent Living (RAIL) Research Centre, Monash University

Expertise

Professor Hill is a physiotherapist and senior researcher, with expertise in falls prevention, exercise for older people, ageing and rehabilitation. Current projects include use of sensor technology to reduce falls in hospitals, evaluation of a program to support caregivers of older people

²³ <https://researchers.uq.edu.au/researcher/1121>

²⁴ <https://research.monash.edu/en/persons/keith-hill>

discharged from hospital, and physical activity to improve health outcomes for older people, including Indigenous Australians.

Professor Richard Holden²⁵

Professor of Economics at UNSW Business School, co-director of the New Economic Policy Initiative, UNSW Sydney

Expertise

Professor Holden has written on topics including network capital, political districting, incentives in organisations, and mechanism design. He is a strong communicator, appearing regularly as a media commentator and influencer, and has published opinion pieces in outlets including The Australian Financial Review, The Australian, The New York Times, and The New Republic. He also writes a weekly column called Vital Signs for The Conversation.

Associate Professor Andrew Jackson²⁶

UNSW Business School,
School of Accounting,
UNSW Sydney

Expertise

Associate Professor Jackson's research examines how accounting information is used by capital market participants, including issues on earnings co-movements, corporate disclosure, stock return volatility, the timeliness of earnings and asset pricing models. This research has the potential to improve the understanding of the sources of earnings and the degree to which firm's earnings are related to industry peers, and aims to lead to improvements in decision making by users of financial statements, such as improving the ability to forecast future earnings and value assets.

²⁵ <https://www.business.unsw.edu.au/our-people/richardholden>

²⁶ <https://www.business.unsw.edu.au/our-people/andrewjackson>

Chapter 4: Addressing Socio-economic Questions

Professor

Jolanda Jetten^{27,28}

ARC Laureate Fellow, Professor of Social Psychology, FASSA School of Psychology, University of Queensland

Expertise

Professor Jetten's research focuses on social identity, group processes and intergroup relations.

Her specific interests include: Prejudice, oppression, stigmatised and marginalised group membership, coping with discrimination, group membership and mental health, normative influence, conformity and deviance in groups.

Ms Yawei Jiang²⁹

School of Business,
University of Queensland

Expertise

Ms Jiang is a final year PhD candidate in the UQ Business School. Her research focuses on small business resilience in the face of extreme weather events. Her thesis examines how small businesses develop capabilities to build their resilience and the factors that influence their capability development. Her PhD focuses on Cyclone Debbie in Northern Queensland. Yawei's honours thesis explored the motivations and barriers to collaboration in the tourism industry after Cyclone Marcia. She is currently undertaking a placement in Brisbane with EarthCheck to audit templates and global best practices related to tourism risk and resilience programs.

²⁷ <https://psychology.uq.edu.au/profile/2317/jolanda-jetten>

²⁸ <http://www.socialidentitynetwork.com/members/jolanda-jetten/>

²⁹ <https://business.uq.edu.au/profile/2099/yawei-jiang>

Professor Mariano Kulish³⁰

School of Economics,
University of Sydney

Expertise

Professor Kulish brings expertise in macroeconomic policy and especially global economic policy³¹ (with focus on Asia Pacific).

Professor Kulish (with Professor James Morley, University of Sydney) brings strong econometric and quant approaches to issues around fiscal policy and global macroeconomic frameworks and have regularly worked with the Commonwealth Government.

Mr Yulin Li

PhD Scholar, University of Adelaide

Expertise

Mr Li is a first year PhD scholar, focusing on whether general

shareholders have similar opinions to institutional shareholders.

Professor John Mangan³²

Director, Australian Institute for Business and Economics (AIBE),
Faculty of Business, Economics and Law, University of Queensland

Expertise

With extensive academic, consultancy, editorial and 'expert opinion' experience, Professor Mangan is a skilled economic modeller, and a leading researcher in the areas of:

- Labor and Social Economics
- Economic impact analysis
- Economics of professional sports
- Human resource management
- Workplace health and safety
- Applied micro-economics

³⁰ <https://www.sydney.edu.au/arts/about/our-people/academic-staff/mariano-kulish.html>

³¹ <https://www.sydney.edu.au/arts/our-research/futurefix/global-perspectives-on-economic-policy.html>

³² <https://researchers.uq.edu.au/researcher/80>

Chapter 4: Addressing Socio-economic Questions

Dr Francis Markham³³

Research Fellow, Centre for
Aboriginal Economic Policy Research,
College of Arts and Social Sciences,
Australian National University

Expertise

Dr Markham focuses on economic geography, Aboriginal and Torres Strait Islander policy, studies of Aboriginal and Torres Strait Islander society, policy and administration.

He researches demographic impacts of external factors (such as COVID-19 or Poker machines) on economic and cultural impacts on Indigenous peoples. Dr Markham has published key advice on the impact on public health measures on income from art in remote Indigenous communities³⁴.

Scientia Professor Andrew Martin³⁵

Professor of Educational
Psychology, UNSW Sydney

Expertise

Professor Martin is an expert in educational psychology.

Professor Martin is a Registered Psychologist (Psychology Board of Australia), recognised for psychological and educational research in achievement motivation and for the quantitative methods he brings to the study of applied phenomena. Although the bulk of his research focuses on motivation, engagement, and achievement, he is also published in important cognate areas such as Aboriginal/Indigenous education, ADHD, gifted and talented, academic resilience and academic buoyancy, adaptability, goal setting, pedagogy, and teacher-student relationships. His research also bridges other disciplines through assessing motivation and engagement in sport, music, and work.

³³ <https://researchers.anu.edu.au/researchers/markham-f>

³⁴ <https://theconversation.com/the-other-indigenous-coronavirus-crisis-disappearing-income-from-art-134127>

³⁵ <https://www.arts.unsw.edu.au/our-people/andrew-martin>

Dr Chris McCaw^{36,37}

Lecturer, University of Melbourne

Expertise

Dr McCaw is a Lecturer in Education at the Melbourne Graduate School of Education. His research explores the nature of teaching and teacher professionalism, the purposes of education, post-secularism in education, and questions of self, identity and agency. He teaches courses in philosophy and sociology of education, curriculum and pedagogy within Master of Teaching and Education breadth programs. He has a background working in secondary schools, specialising in inquiry learning in the sciences, humanities and philosophy.

Professor Lisa McDaid³⁸

Professor (Social Science & Health),
Institute for Social Science Research,
University of Queensland

Expertise

Professor McDaid's research aims to improve health and wellbeing, particularly among the most disadvantaged in our society. She is interested in how best to engage communities at high risk of poor health and wellbeing in health improvement research and in developing new methods of co-production for intervention development. Her work is exploring how to affect change and improve health at the community level via assets and strengths-based approaches.

³⁶ <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

³⁷ <https://findanexpert.unimelb.edu.au/profile/5744-chris-mccaw>

³⁸ <https://issr.uq.edu.au/profile/2531/lisa-mcdaid>

Chapter 4: Addressing Socio-economic Questions

Dr Siobhan McDonnell^{39,40}

Lecturer, Crawford School of Public Policy, College of Asia and the Pacific, Australian National University

Expertise

Dr McDonnell is a legal anthropologist who engages in applied work in Indigenous Australia and the Pacific around climate change, land rights and gender. Dr McDonnell has contributed both research and policy outcomes in the following areas: land reform, gender and natural resource management, climate change, disaster management, legal pluralism and the operation of customary institutions.

Professor Warwick McKibbin AO⁴¹

Director of the Centre for Applied Macroeconomic Analysis (CAMA). He is also Director of Policy Engagement, and ANU Node Leader, The ARC Centre of Excellence in Population Ageing Research (CEPAR), Australian National University

Expertise

Professor Warwick McKibbin has two broad areas of applied research which are currently contributing to advising governments and central banks around the world.

Global Economic Models

The G-Cubed suite of models is used for a variety of macroeconomic/trade/climate/energy policy applications. G-Cubed has also been used for modelling past pandemics and the current COVID-19 pandemic. The models can be used to assess the consequences of different macroeconomic and health interventions as well understanding unintended consequences of policies. The Australian Treasury has used G-Cubed models in house since 1993. Many foreign governments, the International Monetary Fund, the World Bank, and central banks have used these models for policy analysis over the past 3 decades.

39 <https://researchers.anu.edu.au/researchers/mcdonnell-s>

40 <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

41 <https://crawford.anu.edu.au/people/academic/warwick-mckibbin>

Policy design

Professor Warwick McKibbin has developed many policy proposals to deal with issues related to climate policy/monetary policy/trade policy/fiscal policy/energy policy/pandemics. To address the current crisis, he has proposed using income contingent loans for households and small businesses. He was invited to the Prime Minister's office to discuss these ideas in March 2020.

Recent publications on the COVID-19 response can be found at:

- <https://www.abc.net.au/news/programs/the-business/2020-03-11/extended-interview-with-warwick-mckibbin/12047666>
- <https://www.brookings.edu/blog/up-front/2020/03/06/what-are-the-possible-economic-effects-of-covid-19-on-the-world-economy-warwick-mckibbins-scenarios/>
- <https://www.abc.net.au/news/2020-03-05/coronavirus-COVID-19-economic-cost-modelling-and-worry-over-panic/12010556>

-
- <https://www.afr.com/policy/economy/hecs-style-loans-backed-for-coronavirus-20200320-p54c7s>

Professor Renee Fry-McKibbin⁴²

Centre for Applied Macroeconomic Modelling, Australian National University

Expertise

Professor Fry-McKibbin's recent work models the effects of Chinese industrialization and commodity price shocks on Australia and looks at the interaction between foreign and domestic economic adjustment mechanisms. Her models could be adapted and combined with her work on financial market crises to include the effects of COVID-19 on Chinese resource demand, commodity prices, and global equity markets. The subsequent impact on crucial variables such as Australian GDP growth, foreign output growth, unemployment, mining investment, inflation, and the exchange rate can then be assessed. She is also a co-

⁴² <https://crawford.anu.edu.au/people/academic/renee-fry-mckibbin>

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investigator on a grant examining the complex factors explaining Australia's historical resilience to a recession. Understanding these factors and combining them with lessons learned from current events will be crucial in policy responses to COVID-19.

Dr Nikki Moodie^{43,44}

Senior Lecturer in Indigenous Studies,
University of Melbourne

Expertise

Dr Nikki Moodie (Gomeri) is a Senior Lecturer in Indigenous Studies in the School of Social and Political Sciences at the University of Melbourne, Australia. Dr Moodie received her PhD in Sociology from the Australian National University, and held the University of Melbourne's inaugural Research Fellowship in Indigenous Research from 2016

to 2018. Her research focuses on Indigenous policy and governance, with a particular focus on identity, social networks and education.

Professor James Morley⁴⁵

School of Economics,
University of Sydney

Expertise

Professor Morley brings expertise in macroeconomic policy and especially global economic policy⁴⁶ (with particular focus on Asia Pacific).

Professor Morley (with Professor Mariano Kulish, University of Sydney) brings strong econometric and quant approaches to issues around fiscal policy and global macroeconomic frameworks and have regularly worked with the Commonwealth Government.

43 <https://findanexpert.unimelb.edu.au/profile/741474-nikki-moodie>

44 <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

45 <https://www.sydney.edu.au/arts/about/our-people/academic-staff/james-morley.html>

46 <https://www.sydney.edu.au/arts/our-research/futurefix/global-perspectives-on-economic-policy.html>

Associate Professor Ben Phillips⁴⁷

Associate Professor, ANU
College of Arts and Social Sciences,
Australian National University

Expertise

Associate Professor Ben Phillips works in applied economics, statistics and demography.

He has nearly 20 years of experience in economic and public policy analysis work in Australia, and has expertise in the development of microsimulation models for the purpose of analysing tax and transfer systems. He also has broad experience in economic modelling, economics statistics and public policy in Australia. He also has a strong interest in matters relating to housing affordability, superannuation and income inequality.

Scientia Professor John Piggott AO⁴⁸

Director of the ARC Centre of Excellence in Population Ageing Research (CEPAR); Scientia Professor of Economics, UNSW Sydney

Expertise

Professor Piggott is an expert in retirement and pension economics, and finance.

Professor Piggott's Australian and international policy experience includes membership of both the Henry Tax Review Panel (2008–2009) and the Australian Ministerial Superannuation Advisory Committee (2007–2011); appointed co-chair of the G20 Population Ageing Task Force (2018); appointed as member of the US National Academy of Medicine's (NAM) International Commission on Creating a Global Roadmap for Healthy Longevity (2019).

⁴⁷ <https://researchers.anu.edu.au/researchers/phillips-bg?term=ben+phillips>

⁴⁸ <https://www.business.unsw.edu.au/our-people/johnpiggott>

Chapter 4: Addressing Socio-economic Questions

Ms Maeve Powell⁴⁹

Research Associate and PhD Scholar,
College of Asia and the Pacific
and College of Science, Australian
National University

Expertise

Ms Powell focuses on trans-Indigenous scholarship at the intersection of Indigenous studies and critical geography. She is interested in spatial decolonisation, urban Indigenous belonging, digital story mapping and Indigenous education.

Dr Signe Ravn^{50,51}

Senior Lecturer In Sociology,
University of Melbourne

Expertise

Dr Signe Ravn is a Senior Lecturer in Sociology in the School of Social and Political Sciences at the University of Melbourne, Australia. Her research focuses on young people and disadvantage, with a focus on risk, gender and processes of

marginalisation, and she is particularly interested in how young people imagine and forge their futures. She also contributes to qualitative methodological advancement, especially in relation to visual and creative methods. She has published her work in several high-ranked journals and holds an ARC-DECRA fellowship (2017–2020).

Professor Peter Robertson⁵²

Dean and Head of Business School,
University of Western Australia

Expertise

Professor Robertson has a dedicated research interest in economics. His work focuses on the changing nature of the world economy with the rise of China, possible rise of India, and implications for trade, wages, political conflict and economic growth. Currently, he focuses on economic policy and the state of the world economy while also studying the role of population growth through history in causing poverty.

49 <https://researchers.anu.edu.au/researchers/powell-m>

50 <https://findanexpert.unimelb.edu.au/profile/664887-signeravn>

51 <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

52 <https://www.uwa.edu.au/profile/peter-robertson>

Professor Brendan Sargeant⁵³

Professor of Practice in Defence and Strategic Studies, Coral Bell School of Asia Pacific Studies, Australian National University

Expertise

Professor Sargeant can advise on crisis management, as well as undertake, or manage, the design and implementation of major governance and administrative systems reform. He has specific subject area experience and expertise in relation to Defence planning.

He is the Independent Chair of the Audit and Risk Committees of the Department of Foreign Affairs and Trade and the Department of Finance; an independent Member of the Project Control Board for the Department of Human Services ICT and Business Transformation Program; and a member of the Reform 2022 Oversight Board for

the Department of Defence. He has broad Commonwealth Public Sector experience in very senior management and policy roles in Defence, Centrelink and Finance. From September 2013 to October 2017, he was the Associate Secretary of Defence. Prior to that appointment he was the Deputy Secretary Strategy. As Associate Secretary, he was responsible for oversight of the implementation of the First Principles Review, a major reform of Defence organisation and enterprise governance, planning, performance and risk management. He was principal author of the 2013 Defence White Paper.

Dr Ashley Schram^{54,55}

Fellow, College of Asia and the Pacific, Australian National University

Expertise

Dr Schram is a Braithwaite Fellow in the School of Regulation and Global Governance (RegNet) at the Australian

⁵³ <https://researchers.anu.edu.au/researchers/sargeant-bj?term=brendan+sarge>

⁵⁴ <https://researchers.anu.edu.au/researchers/schram-a>

⁵⁵ <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

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National University and Deputy Director of the Menzies Centre for Health Governance. From 2017–2019 Ashley led a programme of research on policy evaluation in an NHMRC Centre of Research Excellence in the Social Determinants of Health Equity. Her research investigates the regulation, governance, policy, and politics of the social determinants of health inequities. Focal areas include food systems, trade and investment liberalisation, noncommunicable diseases, and sustainable development.

Mr Roberto Schurch⁵⁶

School of Education,
University of Queensland

Expertise

Mr Schurch is a PhD candidate at UQ. His thesis is on “Comparative research of the OECD-PIAAC “Survey of Adult Skills” influence on Lifelong Learning policies in

Australia, Chile and Singapore”. He has extensive experience from his time at the Ministry of Education of Chile Research Centre where he was in charge of the management and development of the researches, studies, evaluations and statistics that serve as basis to the creation and application of policies and programs of the Ministry.

Professor Marc Stears⁵⁷

Director of Sydney Policy Lab,
University of Sydney

Expertise

Professor Stears specialises in democratic theory and the history of ideologies and social movements.

Professor Stears is engaged in work on supporting community resilience and has recently developed principles for policy making⁵⁸ in relation to COVID-19.

56 <https://graduate-school.uq.edu.au/profile/948/roberto>

57 <https://www.sydney.edu.au/arts/about/our-people/academic-staff/marc-stears.html>

58 <https://www.sydney.edu.au/content/dam/corporate/documents/sydney-policy-lab/principles-for-a-policy-response-to-covid-19.pdf>

Scientia Professor Carla Treloar⁵⁹

Director of the Centre for Social Research in Health and the Social Policy Research Centre, UNSW Sydney

Expertise

Professor Treloar is an expert in social fallout; socioeconomic acceptance and consequences of public health actions, particularly in the field of hepatitis C virus (HCV) and injecting drug use.

Professor Treloar is a primarily qualitative researcher and is grounded in the disciplines of health and social psychology, public health and health policy. Her multidisciplinary research spans health and social psychology, public health and health policy, where she has expertise in applying social, legal and political contexts to health interventions. She has expertise in ensuring public health strategies are appropriately targeted to high risk populations to effect mass behaviour change on a population level.

Professor Jim Watterston^{60,61}

Dean, Melbourne Graduate School of Education, Enterprise Professor, Education Systems, University of Melbourne

Expertise

Professor Watterston brings more than 35 years of successful experience across a diverse range of educational roles and sectors. In addition to appointments to many educationally related Boards, Professor Watterston has previously served for six years as the National President for the Australian Council for Education Leaders and is recognised as an influential advocate for the education sector. His contribution to education has been acknowledged both nationally and internationally with awards from several professional bodies and educational institutions.

⁵⁹ <https://research.unsw.edu.au/people/scientia-professor-carla-treloar>

⁶⁰ <https://findanexpert.unimelb.edu.au/profile/815187-jim-watterston>

⁶¹ <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

Chapter 4: Addressing Socio-economic Questions

Professor Peter Whiteford⁶²

Crawford School of Public Policy,
Australian National University

Expertise

Professor Whiteford has published extensively on various aspects of the Australian and international systems of income support. In July 2008, he was appointed by the Australian government to the Reference Group for the Harmer Review of the Australian pension system. He was an invited keynote speaker at the Melbourne Institute-Australia's Future Tax and Transfer Policy Conference held in June 2009 as part of the Henry Review of Australia's Future Tax System, and he participated in the Australian Government Tax Forum held in Canberra in October 2011. Professor Whiteford can provide advice on the welfare policy-related aspects of the COVID-19 response.

Professor Simon Wilkie⁶³

Dean, Faculty of Business and Economics; Head of Monash Business School, Monash University

Expertise

Professor Wilkie is an expert in business and business recovery with significant experience in business disruption, recovery and innovation. He is former Chief Economist of Microsoft.

Dr Mandy Yap⁶⁴

Research Fellow, College of Arts and Social Science, Australian National University

Expertise

Dr Yap works in population trends and policies, economic development and growth, Aboriginal and Torres Strait Islander policy, studies of Aboriginal and Torres Strait

62 <https://crawford.anu.edu.au/people/academic/peter-whiteford>

63 <https://lens.monash.edu/@simon-wilkie-monash>
<https://www.monash.edu/business/about-us/leadership-team/professor-simon-wilkie>

64 <https://researchers.anu.edu.au/researchers/yap-ml>

Islander society, urban and regional economics and public policy. Her research interests are indicators of wellbeing and quality of life, participatory methodologies, mixed-methods, gender and development and Indigenous wellbeing.



INFORMATION

How information is used and communication managed, how people can be helped to understand the crisis while maintaining a sense of order in an unrecognisable world, are vital to addressing the pandemic. More accurate predictions of the virus' impact based on modelled data add certainty and inform our strategies. Government policies and restrictions are more effectively conveyed, tailored to different audiences. New technologies support a shift in how we work and our social environments while monitoring and controlling the spread of infection. Studying social media data can help anticipate and address opportunistic threats to our way of life and our sovereignty.



AND

These are all areas and others where Go8 experts are informing and driving advances in how we adapt to our new circumstances. Battling all aspects of COVID-19 is a “Team Australia” effort.



COMMUNICATION

5 Information and Communication

Professor Rob Ackland¹

Professor, School of Sociology,
College of Arts and Social Sciences,
Australian National University

Expertise

Professor Ackland works in network science, web science, social network analysis, index number theory and international comparisons of income and poverty.

In addition to misinformation and inauthentic behaviour, Rob Ackland with colleague Mahin Raissi is interested in using computational approaches and social media data to examine how COVID-19 may be leading to “spillover effects” in terms of perceived threats and issues of concern, including spillovers into racism. A project with Yoshi Kashima at University of Melbourne, with Raissi entails a Facebook research application on this topic. Ackland is also planning to investigate with colleagues a large-scale dataset of COVID-19 Tweets about to

be released. Ackland’s work with Defence Science Technology Group on information diffusion relating to COVID-19 is also relevant.

Published key advice:

- Ackland, R. and K. Gwynn (2020), “Truth and the dynamics of news diffusion on Twitter,” chapter in R. Greifeneder, M. Jaffe, E. Newman and N. Schwarz (eds.) *The Psychology of Fake News: Sharing, Accepting and Correcting Misinformation*
- Ackland, R., Jensen, M. & O’Neil, M. (2020). Submission No. 8 to the Senate Select Committee on Foreign Interference through Social Media²
- RizoIU, M. A., Graham, T., Zhang, R., Zhang, Y., Ackland, R. and L. Xie (2018), “#DebateNight: The Role and Influence of Socialbots on Twitter During the 1st 2016 U.S. Presidential Debate”, In International AAAI Conference on Web and Social Media (ICWSM ’18), pages 1–10, arXiv eprint 1802.09808

¹ <https://researchers.anu.edu.au/researchers/ackland-rj>

² https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Foreign_Interference_through_Social_Media/ForeignInterference/Submissions

Associate Professor Sara Bice³

Crawford School of Public Policy,
Australian National University

Expertise

Associate Professor Sara Bice is the Director of the Institute for Infrastructure in Society (I²S) which draws in more than 17 industry partners including Lendlease, Transurban, IAP² as well as the Victorian, NSW and Queensland state infrastructure authorities, to develop a programmatic, sector-wide approach to inform community engagement, address cumulative impacts of major projects, model poorly defined social risks and shape public policy around social impact management. She can provide expert advice on COVID-19 community engagement planning.

Professor Deborah Bunker⁴

Professor of Business Information
Systems, Sydney Business School,
University of Sydney

Expertise

Professor Bunker was awarded funding from the NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 to study “Infectious Diseases and “Infodemics” – The Role of Social Media in Individual and Collective Meaning Making” with Christian Ehnis.

Professor Bunker is a leading scholar in organisational collaboration and change management in complex organisational and environmental settings. She is a Chief Investigator on an EU Horizon 2020 project RISE_SMA Social Media Analytics for Society and Crisis Communication, and a Norwegian Research Council SAMRISK Work Program project looking at Sharing Incident and Threat Information During Crises.

³ <https://energy.anu.edu.au/about-us/participants/sara-bice>

⁴ <https://www.sydney.edu.au/business/about/our-people/academic-staff/deborah-bunker.html>

Chapter 5: Information and Communication

Dr Vladimir Canudas-Romo⁵

Demographer, College of Arts and Social Sciences, Australian National University

Expertise

Dr Canudas-Romo is an expert in mortality modelling, longevity measures (life expectancy evaluation) and mathematical demography.

Dr Canudas-Romo has several studies analysing the effect that violence (a sudden increase of this cause of death) has had in the survival and the wellbeing of populations. Other studies seek to show how to assess the impact of different causes of death to aggregate measures of survival (e.g. life expectancy). He has published key advice:

- Youth lost to homicides: disparities in survival in Latin America and the Caribbean⁶
- Cause of death decomposition of cohort survival comparisons⁷
- Cause-specific life-years lost in people with mental disorders: a nationwide, register-based cohort study⁸
- Mexico's epidemic of violence and its public health significance on average length of life⁹

Dr Jenny Davis¹⁰

College of Arts and Social Sciences, Australian National University

Expertise

Broad and overlapping trajectories in social psychology and technology studies. Dr Davis focuses on role-taking, status, stigma, and identity, along with technological affordances and the politics of digital design.

⁵ <https://researchers.anu.edu.au/researchers/canudas-romo-v>

⁶ DOI: 10.1136/ bmjgh-2018-001275

⁷ DOI: 10.1093/ije/dyz276

⁸ DOI: 10.1016/S2215-0366(17)30429-7

⁹ DOI: 10.1136/jech-2015-207015

¹⁰ <https://researchers.anu.edu.au/researchers/davis-jl>

Her research focuses on how digital technologies integrate into everyday social life. COVID-19 and the physical separation required to curb the virus' spread has meant that interactions quickly and dramatically shifted to online platforms. She can speak to the social dynamics of digitally mediated communication, the social psychology of interpersonal interactions in light of the shift online, and broader societal issues about access and inequality.

Associate Professor Ullrich Ecker¹¹

Associate Professor,
Faculty of Science, School
of Psychological Science,
University of Western Australia

Expertise

Associate Professor Ecker has expertise in the effects of misinformation on reasoning and decision making, and informed communication strategies

Dr Christian Ehnis¹²

Sydney Business School,
University of Sydney

Expertise

Dr Ehnis was awarded funding from the NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 to study "Infectious Diseases and "Infodemics" – The Role of Social Media in Individual and Collective Meaning Making" with Deborah Bunker.

Professor Nick Enfield¹³

Professor of Linguistics, Director
of Sydney Social Sciences and
Humanities Advanced Research
Centre, University of Sydney

Expertise

Professor Enfield was awarded funding from the NHMRC Centre of Research Excellence in Emerging

¹¹ <https://research-repository.uwa.edu.au/en/persons/ullrich-ecker>

¹² <https://www.sydney.edu.au/business/about/our-people/academic-staff/christian-ehnis.html>

¹³ <https://www.sydney.edu.au/arts/about/our-people/academic-staff/nick-enfield.html>

Chapter 5: Information and Communication

Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 to study the role of bad information and flawed cognition in the spread of COVID-19; the project aims to discover “what kinds of (dis) information spread on English and Mandarin language online outlets re: COVID-19, and are there differences? Is it possible to ‘inoculate’ people against bad information?”

Dr Nic Geard¹⁴

School of Computing and Information Systems, University of Melbourne

Expertise

Dr Geard is an expert in the development and application of computational models of infectious disease transmission and control.

Professor Lyn Gilbert¹⁵

Clinical Professor, Medicine (Immunology & Infectious Diseases),

Westmead Clinical School, Westmead Institute for Medical Research, University of Sydney

Expertise

Professor Gilbert was awarded funding from the NHMRC Centre of Research Excellence in Emerging Infectious Diseases (CREID) and Australian Partnership for Preparedness Research on Infection Disease Emergencies (APPRISE) in March 2020 for the project “COVID-19 infection prevention and control” with Chris Degeling to investigate the optimal communication strategies for different occupational groups and members of the public regarding appropriate infection prevention and control responses.

Until recently she was Director of the Centre for Infectious Diseases & Microbiology Laboratory Services and Director of Infection Prevention and Control for Western Sydney Local Health District, at Westmead Hospital.

14 <https://findanexpert.unimelb.edu.au/profile/432264-nic-geard>

15 <https://www.apprise.org.au/person/professor-lyn-gilbert/>

Associate Professor Kathryn Glass¹⁶

Research School of Population Health,
Australian National University

Expertise

Associate Professor Glass is a research expert in Biostatistics and Epidemiology, and Research Leader of the Infectious disease epidemiology and modelling Group at the ANU. Her research interests include:

- Mathematical modelling of infectious diseases to inform public health policy
- Effects of vaccination on disease outbreaks
- Modelling intervention strategies for emerging infectious diseases
- Source attribution for pathogens causing gastroenteritis

Professor Quentin Grafton^{17,18}

Professor, Co-Chair of ANU Water Initiative; Chairholder, UNESCO; Chair in Water Economics and Transboundary Water Governance; Director, Centre for Water Economics, Environment and Policy; Convener, Geneva Actions on Human Water Security, ANU College of Asia and the Pacific, Australian National University

Expertise

Professor Grafton's work focuses on applied environmental/resource economics and public policy problems. Relevant published work:

- Article that COVID-19 modelling suggests going early and going hard is needed¹⁹

¹⁶ <https://researchers.anu.edu.au/researchers/glass-ka>

¹⁷ <https://researchers.anu.edu.au/researchers/grafon-rqq>

¹⁸ <https://huntlab.science.unimelb.edu.au/home/roadmap/contributors/>

¹⁹ <https://theconversation.com/modelling-suggests-going-early-and-going-hard-will-save-lives-and-help-the-economy-135025>

Chapter 5: Information and Communication

Associate Professor Carolyn Hendriks²⁰

Crawford School of Public Policy,
Australian National University

Expertise

Associate Professor Hendriks is an internationally recognised expert on community engagement in public policy. She has over three decades of experience working with communities, NGOs and governments to design and improve community engagement processes. She has built capacity within community organisations, government and parliamentary institutions to engage with their constituents in ways that are inclusive, deliberative and meaningful. Carolyn's current work on community-led problem-solving initiatives in regional and rural Australia holds important lessons for how to empower everyday people and their communities in repair and transition.

She has led numerous empirical projects in Australia, Germany and the Netherlands on the role of interests,

power, networks, markets and elites in participatory modes of governing. Carolyn's recent publications consider pathways for strengthening public deliberation and citizen engagement in mainstream spaces of representative democracy, such as legislative committees and constituency service. She can provide expert advice on COVID-19 community engagement planning.

Ms Bernadette Hyland-Wood²¹

School of Political Science
and International Studies,
University of Queensland

Expertise

Bernadette Hyland-Wood is a UQ Global Change Scholar and PhD candidate in public policy and governance. Her PhD research is on leadership and organisational culture within federally funded scientific data programs. As a professional data scientist, Bernadette pioneered United States (US) federal data sharing programs for the US Environmental Protection Agency and Government Publishing

²⁰ <https://researchers.anu.edu.au/researchers/hendriks-cm?term=carolyn+hendr>

²¹ <https://graduate-school.uq.edu.au/profile/340/bernadette>

Office and was a technical advisor to US Health and Human Services and the United Nations (UN) Food and Agriculture Organization. As chair of the international World Wide Web Consortium's Government Linked Data working group (2011–13), she served as editor of international data standards, and has authored peer reviewed articles and chapters on open government data. Bernadette was the founder of three software and hardware startups in Australia and the US, including Tucana Technologies Inc acquired by Northrop Grumman (2005).

Associate Professor Sango Mahanty²²

Crawford School of Public Policy,
Australian National University

Expertise

Associate Professor Mahanty is a human geographer studying the politics of social and environmental change. Her recent ARC Future Fellowship explored these related themes in a region of rapid social and environmental change along

the Cambodia-Vietnam border. Her current work in this region examines how communities and civil society are responding to dramatic processes of nature-society transformation or “rupture”. She has worked with civil society and government in Australia and the Asia-Pacific, and currently lead the Resources, Environment and Development Program at ANU's Crawford School of Public Policy.

Professor James McCaw²³

Professor in Mathematical Biology,
University of Melbourne

Expertise

Professor McCaw is a mathematical biologist and infectious diseases epidemiologist with a PhD in theoretical physics from the University of Melbourne. He holds a split appointment between the Department of Mathematics and Statistics (Mathematical and Computational Biology) and Modelling and Simulation Unit, Centre for

²² <https://researchers.anu.edu.au/researchers/mahanty-s>

²³ <https://findanexpert.unimelb.edu.au/profile/4554-james-mccaw>

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Epidemiology and Biostatistics, Melbourne School of Population and Global Health. His interests span from modelling host-pathogen-drug dynamics, with a focus on influenza and malaria, to developing public health control strategies for emerging and re-emerging infectious diseases.

Dr Adriana Milazzo²⁴

Senior Lecturer Public Health,
University of Adelaide

Expertise

Dr Milazzo's expertise is in:

- Outbreak investigation (case interviews, contact tracing)
- Infectious disease surveillance
- Data management and analysis
- Epidemiological research methods (cohort and case control studies)
- Epidemiological analytical studies – time series, multivariable logistic regression
- Proficiency in the use of STATA (statistical package)
- Social networking patterns

Dr Milazzo has extensive experience and knowledge in communicable disease control and prevention. From 1998 to 2007 she held several positions in the Communicable Disease Control Branch (CDCB), SA Health including as a Public Health Officer in the Disease Surveillance Investigation Section. She has continued her experience working in infectious disease control and prevention and is the casual pool for CDCB in her role as a Public Health Officer. She joined the University of Adelaide in 2007 to coordinate a national sentinel surveillance system for influenza like-illness (ASPREN). Current research interests include:

- Temperature-time relationship between heatwaves and notifications for infectious disease (specifically Salmonella and Campylobacter notifications)
- Invasive Meningococcal Disease – identification and management of close-contacts of cases and social networking analysis

²⁴ <https://researchers.adelaide.edu.au/profile/adriana.milazzo>

Professor

George Milne²⁵

Professor, Faculty of Engineering and Mathematical Sciences, Computer Science and Software Engineering, University of Western Australia

Expertise

Professor Milne has been modelling COVID-19 using an established, highly detailed, individual-based model since January. He has been providing results on the effectiveness of a range of social distancing measures to the Department of Health WA.

A paper presenting these results was uploaded to the medRxiv preprint platform²⁶.

Dr Sarah Milne^{27,28}

Crawford School of Public Policy, Australian National University

Expertise

Dr Milne's expertise is in human geography and anthropology. She studies natural resource struggles and environmental intervention, particularly when it comes to community-based conservation; resource rights initiatives; and market mechanisms for conservation. Most of her research is focused on Cambodia, where she has been active as a conservationist, ethnographer, and advocate since 2002.

Dr Lewis Mitchell²⁹

Senior Lecturer in Applied Mathematics, School of Mathematical Sciences, University of Adelaide

Expertise

Dr Mitchell has expertise in applied mathematics.

²⁵ <https://research-repository.uwa.edu.au/en/persons/george-milne>

²⁶ See <https://www.medrxiv.org/content/10.1101/2020.03.20.20040055v1.article-info> and <https://www.medrxiv.org/content/10.1101/2020.03.20.20040055v1.article-metrics>

²⁷ <https://researchers.anu.edu.au/researchers/milne-sa>

²⁸ <https://crawford.anu.edu.au/people/academic/sarah-milne>

²⁹ <https://researchers.adelaide.edu.au/profile/lewis.mitchell>

Chapter 5: Information and Communication

Dr Mitchell works on monitoring epidemics using social media data and how information moves over social networks using mathematical models, coupled with data science techniques. His research interests are in computational social science, human dynamics, online social networks, as well as data assimilation.

Professor Lyle Palmer³⁰

Professor of Genetic Epidemiology,
School of Public Health, Faculty
of Health and Medical Sciences,
University of Adelaide

Expertise

Professor Palmer works on how information moves over social networks using mathematical models, coupled with data science techniques. Research interests are in computational social science, human dynamics, online social networks, as well as data assimilation.

Professor

Philippa Pattison AO³¹

Deputy Vice-Chancellor (Education),
University of Sydney

Expertise

Professor Pattison is an expert on the structure and dynamics of social contact for human disease transmission models.

She is a quantitative psychologist by background, whose primary focus of research is the development and application of mathematical and statistical models for social networks and network processes. Her work has broad application and has most recently focussed on the transmission of infectious diseases and the recovery of communities following the 2009 Victorian bushfires.

Dr Collin Payne³²

Lecturer, School of Demography,
College of Arts and Social Sciences,
Australian National University

³⁰ <https://researchers.adelaide.edu.au/profile/lyle.palmer>

³¹ <https://www.sydney.edu.au/about-us/governance-and-structure/portfolios/education-portfolio/academic-staff/philippa-pattison.html>

³² <https://researchers.anu.edu.au/researchers/payne-c?term=Collin+payne>

Expertise

Dr Payne has expertise in mortality, population trends and policies, applied statistics, stochastic analysis and modelling and epidemiology.

His substantive research centres on the intersections between population ageing and population health, with a focus on understanding the dynamics of chronic health conditions, frailty, and multimorbidity over time and across generations. He also researches the implications of the co-existence of chronic conditions and infectious diseases (primarily HIV/AIDS) for both individual health outcomes and health systems. His methodological research centres on causal multistate models and demographic microsimulation.

Dr Michael Phillips³³

Senior Lecturer, Maths Science & Technology, Monash University

Expertise

Dr Phillips focuses on digital education. His work focuses on the knowledge expert teachers develop when integrating educational technologies into their practice. He also researches the ways in which expert teachers make active decisions about their classroom technology integration.

Professor David Preen³⁴

Chair, Public Health, School of Population and Global Health, University of Western Australia

Expertise

Professor Preen has been involved with conducting health services research using population-based linked data for over 15 years to study areas including: cancer service delivery; pharmaco-epidemiology; chronic disease management; morbidity of marginalised populations; and methodological advances using medical record linkage.

³³ <https://research.monash.edu/en/persons/michael-phillips>

³⁴ <https://research-repository.uwa.edu.au/en/persons/david-preen>

Chapter 5: Information and Communication

Professor Mikhail Prokopenko³⁵

Director Complex Systems Research Group, School of Civil Engineering, University of Sydney

Expertise

Professor Prokopenko has a strong international reputation in the areas of complex self-organising systems and machine learning. He has modelled the spread of COVID-19 in Australia, suggesting that in order to control the disease (rather than letting the disease control us), at least 80 per cent of the population need to comply with strict social distancing measures for at least 18–19 weeks. If 90 per cent of people comply, then the duration of suppression period can be shorter, at 13–14 weeks.

His project “Modelling transmission and control of the COVID-19 pandemic in Australia”, develops an agent-based model for a fine-grained computational simulation of the ongoing COVID-19 pandemic in Australia. This model is calibrated to reproduce several characteristics

of COVID-19 transmission, accounting for its reproductive number, the length of incubation and generation periods, age-dependent attack rates, and the growth rate of cumulative incidence during a sustained and unmitigated local transmission.

His team’s project is built on their research focusing on nationwide agent-based modelling and software simulation of epidemics and pandemics, which is funded by the ARC’s Discovery Project scheme. The team with input from the Marie Bashir Institute for Infectious Diseases and Biosecurity, has been collaborating with IBM Australia, Los Alamos National Laboratory (USA), and CSIRO.

Professor Ian Reid³⁶
Head, School of Computer Science, and the senior researcher at the Australian Institute for Machine Learning, University of Adelaide

Expertise

Professor Reid is a world-leader in machine learning. He can deploy Machine Learning capabilities in

³⁵ <https://www.sydney.edu.au/engineering/about/our-people/academic-staff/mikhail-prokopenko.html>

³⁶ <https://cs.adelaide.edu.au/~ianr/>

support of data-informed analysis based on historical data sets including the 2009 swine flu pandemic as well as emerging real-time data sets.

Professor Nigel Stocks³⁷

Professor and Head of General Practice and Director of the Australian Sentinel Practices Research Network (ASPREN), University of Adelaide

Expertise

Professor Stocks and his ASPREN team³⁸ have provided National Primary Care surveillance data for influenza and other infectious disease to the Commonwealth Department of Health since 2006. Data is used to report Influenza or Influenza-Like Illness (ILI) per 1000 consultations and to calculate influenza vaccine effectiveness that is used by the DOH and WHO to inform the choice of next year's vaccine.

His Discipline has used electronic medical record data from MedicineInsight³⁹ to report

immunisation rates, disease prevalence, prescribing practices, pathology testing and their associations with risk factors and sociodemographic characteristics in general practice. Professor Stocks and his Discipline have extensive experience in recruiting for and conducting large and small clinical trials in general practice (e.g. ASPREE, WISDOM) and undertaking qualitative research. We will be conducting surveillance of COVID-19, examining its community epidemiology and undertaking clinical trials of POCT testing.

Professor Jean Yang⁴⁰

Faculty of Science,
University of Sydney

Expertise

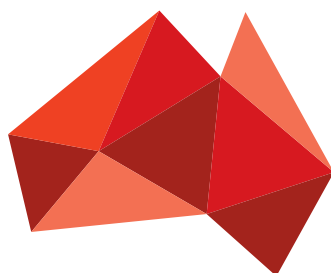
Professor Yang works in statistical bioinformatics. He co-leads an InnoHK project, AI-assisted scalable data analytics for healthcare translation, involving multi-scale predictive models.

³⁷ <https://www.adelaide.edu.au/directory/nigel.stocks>

³⁸ <https://aspren.dmac.adelaide.edu.au/>

³⁹ MedicineInsight has data from over 650 practices and 3.5 million patients (<https://www.nps.org.au/medicine-insight>)

⁴⁰ <https://www.sydney.edu.au/science/about/our-people/academic-staff/jean-yang.html>



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