

# MENTAL HEALTH WELLBEING & NEUROSCIENCE

AT FLINDERS UNIVERSITY ——



The Órama Institute is a multi-disciplinary research institute at Flinders University with a focus on research and discovery related to brain and mind and their relationship to the body.

The world's mental health is a global concern.

With up to 450 million people experiencing mental health issues at any one time, we need real-world solutions for what could be the defining social health crisis of the 21st century.

The *Órama* Institute is committed to research and discovery that will create those solutions.

Órama

Ancient Greek: vision, sight and 'a wide view of'

Almost one in two Australian adults experience mental illness in their lifetime. Many of us have personally grappled with a mental health condition, or have extended support to colleagues, friends or family.

The personal and professional cost to individuals from all walks of life, and the social and economic costs to our society, are significant.

Recognising this, Flinders University has established the *Órama* Institute, uniquely bringing together our University's existing research strengths with those of our external partners.

Spanning our expertise in neuroscience, psychiatry, psychology, allied health, engineering, social science and public health, *Órama* represents a unique and comprehensive blend of research capabilities that utilise our health infrastructure extending from Adelaide and regional South Australia, through the centre of Australia to Darwin in the Northern Territory.

Together with our partners and supporters, the *Órama* Institute will develop new solutions and deliver real-world outcomes to revolutionise how we understand, treat and one day, hopefully, prevent mental illness.

Professor Colin J Stirling

62185

President and Vice-Chancellor Flinders University

"Of course we cannot always cure people, but we can surely change the course of an illness if it is treated early and consistently well."

Professor Patrick McGorry
Executive Director
Orygen The National Centre of Excellence in

Youth Mental Health

At Flinders University we have a vision for a community that understands mental health problems and supports those who are challenged by such difficulties.

We have a vision for communities and organisations that are psychologically healthy and ensure the wellbeing of all individuals who belong to them.

We envisage health services that understand all those who have the lived experience of a mental health problem, and an accessible health system that provides effective interventions for those in distress no matter where they live or their circumstances.

Our vision includes engagement with those who have the lived experience of mental health challenges to share their journey and problem solve with us.

Communities where suicide has been expunged. Indigenous communities that are complete with emotional and psychological wellbeing. An educational system that helps build resilience in children to prevent or minimise future distress.

At Flinders University we have a vision for an institute that brings together the best possible expertise locally, nationally and internationally to help us create all of this through science, discovery and discourse.

When we first looked to create an institute with a focus on the mental health and wellbeing of individuals and communities, the name *Órama* soon came to the forefront.

*Órama* is an ancient Greek term for vision. It represents our commitment to use insights from the experiences of people affected by mental health challenges and our research into the human mind and brain to improve the services that we provide or to prevent the need for such services.

*Órama* is a multi-disciplinary research institute based at Flinders University, representing a unique blend of research capabilities centred on the disciplines of basic and applied neuroscience, psychiatry, psychology, allied health, engineering, social science, education and public health.

Research at *Órama* takes a whole-of-person approach, incorporating research at the brain and cellular level through to research around people's experiences, health systems, service delivery models and educational or preventative science.

Our research draws upon five main themes that reflect our current strengths and best prospects for future growth. These themes are:

- Mental health and emotional wellbeing
- Mental health disorders
- Trauma and violence
- Services
- Neuroscience and neurocognition

The *Órama* Institute for Mental Health, Wellbeing and Neuroscience at Flinders University will enable impactful research that will ultimately improve mental health and wellbeing outcomes for all people and communities across Australia and the world.

That is our commitment. Join us to fulfil our vision.

# THEME LEAD:



# **Professor Mike Kyrios**

Vice President & Executive Dean

Flinders College of Education, Psychology and Social Work Theme Lead: Mental Health and Emotional Wellbeing

Throughout his career, internationally recognised clinical psychologist Professor Mike Kyrios has undertaken a range of academic, practice, professional & administrative roles. He also holds adjunct positions at the Australian National University, the University of Melbourne and Swinburne University.

Mike's work encompasses the biopsychosocial spectrum (inclusive of behavioural, cognitive, neuropsychological, developmental and self-based conceptual frameworks and methodologies).

He has published extensively in more than 160 publications and has received over \$21.5 million in grant funding during his career. Mike sits on a range of national and international editorial and review committees and is a prolific presenter to conferences in Australia and internationally.

He has been President of the Australian Psychological Society, National Chair of the College of Clinical Psychologists, and the recipient of national and international awards.

# ÓRAMA'S UNIQUE FEATURES



FOCUS ON RECOVERY AND LIVED EXPERIENCE

BIOPSYCHOSOCIAL FRAMEWORK





BRAIN/MIND/BODY CONNECTIONS

LIFESPAN APPROACH





WORKFORCE DEVELOPMENT

UNIQUE CENTRAL AUSTRALIAN FOOTPRINT



Professor Mike Kyrios

# MENTAL HEALTH AND EMOTIONAL WELLBEING

Australia is no stranger to mental health issues. Around 45 percent of Australians between the ages of 16 and 85 will experience a mental health condition at some point in their lifetime\*.

Flinders is conducting research to improve wellbeing and resilience across the country, including Aboriginal and Torres Strait Islander and rural and remote communities.

\*Australian Bureau of Statistics, Australian Wellbeing Survey (2007)

### SUBTHEME:

#### WELLBEING AND RESILIENCE

# **Lead - Professor Mike Kyrios**

Vice President & Executive Dean College of Education, Psychology and Social Work

Wellbeing and resilience are intrinsically linked to protection against the development of mental illness, and recovery from mental health issues. Higher degrees of wellbeing are associated with lower hospital utilisation rates, improved recovery from surgery and illness, and improved quality of life and disease management in chronic illness.

Flinders University has a competitive advantage in the translation of psychological health and wellbeing across the community. In addition, our partnership with the South Australian Health and Medical Research Institute's (SAHMRI) Wellbeing and Resilience Centre gives us upscalable capabilities for the dissemination of wellbeing interventions. Key collaborations with Tsinghua University (China), Tecmilenio University (Mexico), What Works Wellbeing (UK) and others strengthen the capabilities and research of our partnership.

Flinders is currently conducting a range of funded wellbeing projects across public, education, community and private sectors. Numerous Honours, postgraduate and postdoctoral projects are focusing on matters relating to measurement and assessment of wellbeing, conceptual development, and wellbeing interventions in various health contexts.

#### SUBTHEME:

# ABORIGINAL AND TORRES STRAIT ISLANDER AND RURAL AND REMOTE

# **Lead - Professor Tim Carey**

Director, Centre for Remote Health

## **Lead - Tanja Hirvonen**

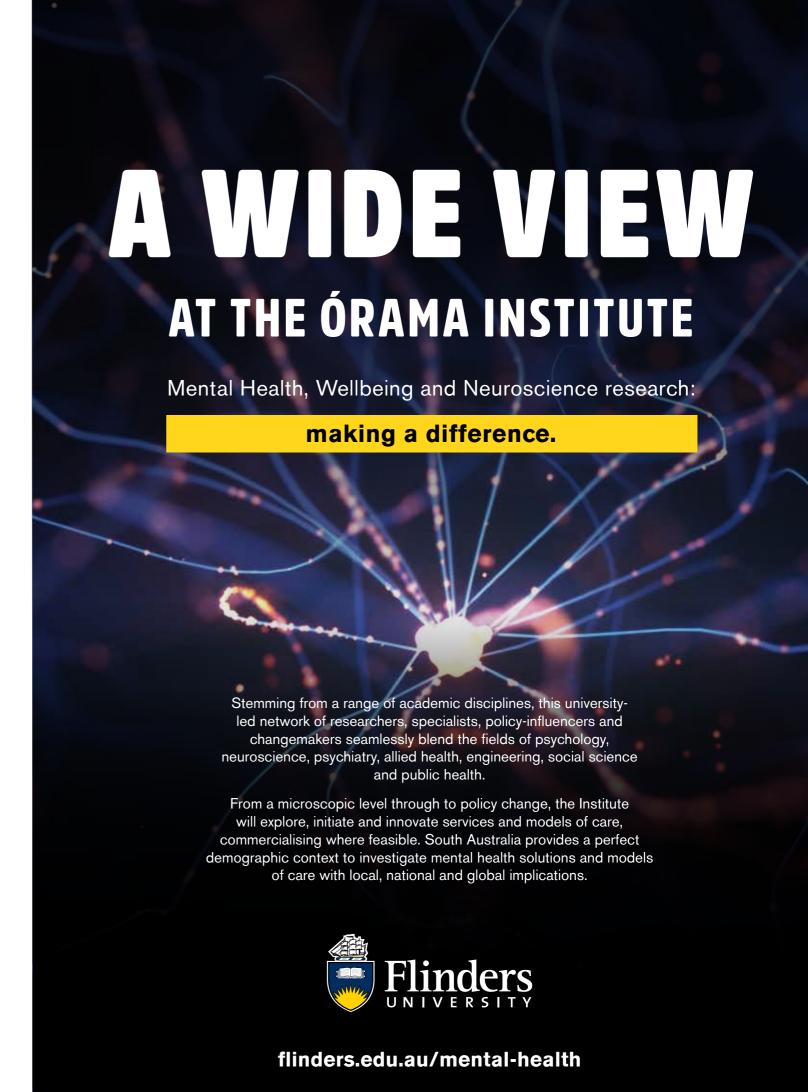
Lecturer - Mental Health, Centre for Remote Health

Access to mental health services in rural and remote areas can be difficult. Many Aboriginal and Torres Strait Islander peoples in particular face a number of barriers to service access, which makes it vitally important that treatments are both effective and appropriate.

Flinders researchers understand that for treatments to be appropriate, there must be an acknowledgement of cultural context and relevance, as mental health is understood differently in different cultures. Aboriginal and Torres Strait Islander peoples, for example, prefer to consider mental health from a Social and Emotional Wellbeing (SEWB) perspective rather than a mainstream medical perspective.

Current research at Flinders by Professor Tim Carey and Tanja
Hirvonen includes the development of appropriate measures of SEWB
to promote high quality interventions with continued effectiveness.
A project is also underway to develop protocols and guidelines for
the appropriate assessment of Aboriginal and Torres Strait Islander
peoples approaching Emergency Departments with self-harm or
suicidal ideas.

Flinders is working with multiple groups and government departments, including the Central Australian Aboriginal Congress, Aboriginal Medical Services Alliance, the Australian Psychological Society and Australian Indigenous Psychologists Association.



# MENTAL HEALTH DISORDERS

Mental health disorders have a substantial impact in Australia. They affect mood, thinking and behaviour, productivity and quality of life. The financial cost is huge; an estimated \$11 billion per year\*. The social cost is even higher, particularly in regional and rural areas.

Our research spans the spectrum of mental health disorders, and aims to reduce the impact, socially and financially, that mental health disorders have on the Australian population.

\*Price Waterhouse Coopers (2014)

#### SUBTHEME:

# **EATING DISORDERS**

# **Lead - Professor Tracey Wade**

Matthew Flinders Distinguished Professor College of Education, Psychology and Social Work

15 per cent of Australian teenage girls are diagnosed with an eating disorder before they turn 19. Struggles with eating disorders can be lifelong, if not life ending. The prevalence of eating disorders and body image problems is also increasing in boys.

Flinders University researchers are forming a picture of eating disorders as a genetic predisposition triggered by environmental factors like weight-related bullying, stressful life changes, and traumatic events. We are also engaged in preventative, evidence-based community programs, and consulting with government and relevant organisations around building up capacity to prevent and treat eating disorders.

Key partnerships with groups including the Statewide Eating Disorder Service, headspace and the National Eating Disorders Collaboration are helping us investigate and develop services for eating disorders, and scale up the dissemination of such services.

### SUBTHEME:

# **ADDICTIONS**

# **Lead - Professor Malcolm Battersby**

Head of Psychiatry, College of Medicine and Public Health

Problem gambling is an emerging public health issue in Australia and around the world, with around 1.5% of the Australian population experiencing serious gambling problems that may require them to seek help. The spill-over effects are significant.

For each person with gambling problems it is known that between 7 and 10 others are adversely affected.

Flinders University has a recognised strength in research into the causes, prevalence, treatment and long-term effects of problematic gambling.

Our partnerships with Beyond Blue, Drug and Alcohol Services SA, the World Health Organisation Drug and Alcohol Section, the International Think-Tank on Gambling Research and other national and international groups and government departments are helping Flinders' researchers develop validated assessment tools that will lead to continuous improvements in the management of behavioural addictions.

#### SUBTHEME:

# MANAGING COMORBIDITY

## **Lead - Professor Sharon Lawn**

Professor, College of Medicine and Public Health

In Australia and internationally, people with mental illness die between 13 - 30 years earlier than the rest of the population. Issues of comorbidity create ongoing complications that current national and international recommendations on monitoring and management of physical health in people with severe mental illness struggle to overcome.

The life expectancy gap continues to widen. As an example, almost half of all cigarettes smoked in Australia, the US and the UK are consumed by people with mental illness. Smoking has led to a tenfold increase in the death rate from respiratory disease for people with schizophrenia alone.

Flinders University has research strengths in chronic condition self-management and care planning in community mental health settings. We are internationally recognised in the field of chronic condition management within diverse populations with both comorbidity and multimorbidity scenarios.

#### SUBTHEME:

# POST-TRAUMATIC STRESS DISORDER (PTSD) AND TRAUMA RELATED DISORDERS

# **Lead - Professor Reg Nixon**

Professor, College of Education, Psychology and Social Work

In Australia, it is estimated at least 1,000,000 people have Post-Traumatic Stress Disorder (PTSD) in any given year, yet only half of those seek therapy.

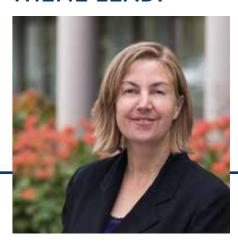
The 12-month prevalence of PTSD was placed as the most prevalent mental disorder, higher than anxiety, depressive and substance disorders, in the 2007 Australian Wellbeing Survey.

Flinders University research explores personalised approaches to standard treatment for clients with complex presentations by better individualising treatments to match their problems. Activities within this theme also examine a stepped-care approach to PTSD, including increased accessibility of services by using online and telehealth methods.

If we can improve treatment for 10-15% of people who actually seek help, this means 50,000 – 75,000 PTSD sufferers will be better off in just one year. Working with national and international partners ranging from headspace and Phoenix Australia to the National Center for PTSD (USA) will help us improve current treatments and develop new approaches for sufferers across their lifespan.

Flinders University researchers are conducting world-leading research across a range of mental health disorders including eating disorders, obsessive compulsive disorders, psychosis, PTSD, behavioural addictions and dementia.

# THEME LEAD:



# **Professor Tracey Wade**Matthew Flinders Distinguished Professor

College of Education, Psychology and Social Work

Professor Tracey Wade has worked as a clinician in the area of eating disorders for almost 30 years. In 2000, she was awarded the Ian M Campbell memorial prize for outstanding contribution to the scientific or professional status of Clinical Psychology in Australia and in 2003 she was awarded the Australian Psychological Society Early Career Award.

Tracey's current research interests are in the aetiology, prevention and treatment of eating disorders and perfectionism. She has co-written two books on the treatment of perfectionism and has over 200 publications in peer reviewed journals. In 2015, Tracey was elected a Fellow of the Academy of the Social Sciences in Australia. She was the President of the Eating Disorder Research Society in 2017-2018 and is an Associate Editor of the International Journal of Eating Disorders. In 2018 she was appointed to the Expert Advisory Panel, Million Minds, a federal mental health research mission.

# TRAUMA AND VIOLENCE

Violence and bullying are global issues. In particular, our young people are affected by bullying in schools. Developing effective programs to deal with the consequences and trauma associated with violence are high priorities for governments across the world and in Australia.

Flinders University research is leading the way in creating evidence-based intervention programs to combat bullying.

#### SUBTHEME:

# **VIOLENCE AND BULLYING PREVENTION**

## **Lead - Professor Phillip Slee**

Professor, College of Education, Psychology and Social Work

Violence is a public health and human rights issue resulting in considerable trauma for all those affected. Violence can take many forms, but the most common form experienced by children and young people is bullying. Its sequelae are physically harmful, psychologically damaging and socially isolating, impacting not only the victim but the perpetrator and bystanders.

Identifiable associated outcomes include, amongst others, depression, anxiety and suicidal ideation. For example, economic modelling indicates that for the one in five young Australians who are seriously victimised the cost to society in terms of illness, medication, psychological care and reduced academic performance exceeds \$0.5 billion annually.

Ongoing school-based intervention programs developed at Flinders University are translated and implemented in countries including Japan, Greece, Malta and Italy demonstrate robust and sustainable reductions in the levels of victimization, and enhanced coping skills and mental health and wellbeing.

Other research investigates the impact of domestic violence on women, engaging men to address domestic violence, and service provision for Aboriginal communities experiencing family violence.

Flinders' partners include Education Services Australia, the South Australian Department for Education, Catholic Education South Australia and the Flinders Centre for Student Wellbeing & Prevention of Violence (SWAPV) Joint Research Laboratory in association with the University of Bologna's Joint Research Laboratory and the University of Bologna.

# THEME LEAD:



# **Professor Phillip Slee**

College of Education, Psychology and Social Work

Phillip Slee is Professor in Human Development in the College of Education, Psychology and Social Work and is a trained teacher and registered psychologist. He is also Director of the Student Wellbeing & Prevention of Violence (SWAPV) Research Centre at Flinders.

Phillip has published extensively in the field of child development, bullying, school violence and stress, and has produced educational resources in the form of videos and resource packages. He has presented his work nationally and internationally in workshops and lectures.

Presently, Phillip is undertaking a number of international research projects on the topic of school violence with researchers from Japan, Korea, China, Canada, England, and

# CENTRAL AUSTRALIAN CORRIDOR

Creating meaningful change for individuals and communities

Our unique physical presence through the central Australian corridor offers a competitive edge when addressing critical issues that affect rural and regional communities, including the Indigenous population.

Our world-leading research will have a profound impact on individuals, businesses and government, transforming the way mental health services are delivered across Australia and around the world.

# SOUTH AUSTRALIA

- BEDFORD PARK
- TONSLEY
- VICTORIA SQUARE
- BROOKLYN PARK
- Adelaide College of Divinity
- NOARLUNGA
- Flinders Information Centre Psychology Clinic
- Onkaparinga Clinical Education Program
- BAROSSA
- Flinders Rural Health South Australia
- PORT LINCOLN
- Lincoln Marine Science Centre
- MOUNT GAMBIER
- Flinders Rural Health South Australia
- Greater Green Triangle University
- Department of Rural Health
- MURRAY BRIDGE
- Flinders Rural Health South Australia
- VICTOR HARBOR
- Flinders Rural Health South Australia
- RENMARK
- Flinders Rural Health South Australia

# **NORTHERN TERRITORY**

Flinders Northern Territory incorporates the Northern Territory Medical Program, Centre for Remote Health and the Poche Centre for Indigenous Health and Well-Being, with sites in:

- DARWIN
- KATHERINE
- NHULUNBUY



# **SERVICES**

In rural and remote Australia, mental health issues are at least as prevalent as they are in metropolitan locations, although limited access to services results in many people not accessing prevention, primary health care and early intervention services.

Flinders University research is improving the ways in which communities interact with services in remote and rural areas.

#### SUBTHEME:

## **DIGITAL MENTAL HEALTH**

# Lead - Associate Professor Niranjan Bidargaddi

Associate Professor of Personal Health Informatics College of Medicine and Public Health

# Lead - Professor Tarun Bastiampillai

Clinical Academic, College of Medicine and Public Health

Currently, the detection, diagnosis and management of mental illness relies primarily on self-reports or observable changes in behaviour and functioning. However, in a world where smartphones and connected wearable devices go hand-in-hand with large data-sets, emerging research suggests that better techniques to characterise and predict psychological problems may be possible.

Utilising novel smartphone-based applications and data-analytics applications, Flinders researchers are investigating the feasibility of real-time monitoring and early detection of symptoms of mental illness.

In partnership with academics from Harvard and New York Upstate Medical University, SAHMRI, Country Health SA, VTT Technical Research Centre of Finland and other organisations, our focus is to leverage digital presence, a by-product of the technology- saturated world that permeates everyday living, to deliver personal health benefits.

# MENTAL HEALTH IN AN ONLINE ENVIRONMENT

There is growing understanding that serious online problems may be indicative of a broader pattern of problem behaviours and/or underlying emotional issues for youth, and vice versa. For example, young people engaging in bullying others online and being victimised online, experience wide ranging social and emotional problems.

Research at Flinders University is dedicated to making a difference to the health and wellbeing of young people's lives by promoting adaptive online and digital behaviour.

#### SUBTHEME:

## YOUTH MENTAL HEALTH

## **Lead - Professor Sarah Wendt**

Professor in Social Work College of Education, Psychology and Social Work

with support from

# **Dr Grace Skrzypiec**

Senior Lecturer, College of Education, Psychology and Social Work

# **Dr Oren Griffiths**

Lecturer in Psychology, College of Education, Psychology and Social Work

It's a disturbing statistic, but half of all mental health conditions in adulthood emerge by age 14, and three quarters by age 24. Research into youth mental health is a global priority.

There is ample evidence that young people involved in harmful bullying have experienced trauma in their own lives, display mental health difficulties and experience psychosocial maladjustment. However, early intervention into trauma events and/or psychotic disorders results in improved outcomes for a typical patient.

Flinders research into youth mental health is broad in scope, including research to improve our understanding of how fundamental changes in neurocognitive processing can lead to early psychotic symptoms. Our researchers are also investigating the features of bullying (i.e. repetition, intended harm and power imbalance) and investigating the development of skills amongst social workers to facilitate positive family change as a way of protecting children from the effects of trauma.

### SUBTHEME:

# **CLINICAL CARE AND PRACTICES**

# **Lead - Professor Eimear Muir-Cochrane**

Professor of Nursing, College of Nursing and Health Sciences

How we deliver mental health care is critical to people who suffer mental illness, and can have a significant impact on whether a person will engage willingly with services into the future.

Research led by Professor Eimear Muir-Cochrane focuses on clinical service research involving investigations into the enablers and barriers to providing best practice.

The nature of this work includes applied research into mental health care practices and the involvement of consumers of mental health.

Our partners include London University, the National Mental Health Commission, Office of the Chief Psychiatrist and SA Health.

# **THEME LEAD:**



# Professor Tarun Bastiampillai Clinical Academic College of Medicine and Public Health

Professor Tarun Bastiampillai has extensive experience in the field of mental health service planning and senior clinical leadership roles. He has provided strategic and policy direction for the delivery of mental health services on a state-wide basis, with a proven capacity to lead fundamental reform and implementation of initiatives for improved performance and clinical outcomes.

Tarun has published in high-impact journals including JAMA, Lancet, JAMA Psychiatry, Lancet Psychiatry and Molecular Psychiatry. He has been an investigator in several digital mental health research projects including the Young and Well CRC and Medical Research Futures Fund projects.

Cutting-edge digital technologies are helping Flinders researchers improve access to services for rural, remote and Indigenous communities.

# NEUROSCIENCE AND NEUROCOGNITION

With strong backgrounds in both basic and clinical science, Flinders University neuroscience and neurocognition researchers cover areas including chronic pain, the emerging Microbiome-Gut-Brain axis, central nervous system regulation of homeostasis, and basic human cognition in psychotic illness.

Research includes investigating the mechanisms underlying chronic pain and its associated comorbidities (such as depression and anxiety), how the gut and other visceral organs communicate to the central nervous system via neural pathways linking them to the brain, and the contribution of human-associated microbiota to health and disease. Other projects include the neural correlates of fundamental learning and attention mechanisms using cutting-edge electrophysiological techniques, and using Brain Computer Interface technologies to study neurocognitive processing.

The translation of such research into clinical applications will be an important development in mental health treatments & prevention strategies.

# THEME LEAD:



**Professor Rainer Haberberger**Clinical Academic

Professor and Head of Anatomy and Histology, College of Medicine and Public Health

Rainer Haberberger is the Head of Department for Anatomy & Histology and the Head of the Pain & Pulmonary Neurobiology Lab within the Flinders Medical Science & Technology cluster of the College of Medicine and Public Health.

He studied Human Biology (Medical Research) at the Philipps-University of Marburg, Germany and was a senior scientist and lecturer at the Institute for Anatomy & Cell Biology, Justus-Liebig University Giessen, Germany.

In 2005 Professor Haberberger was awarded the Mary Overton Neuroscience Fellowship and set up the Pulmonary Neurobiology Lab (now called the Pain & Pulmonary Neurobiology Lab) at Flinders University. Since 2009 he has been an Associate Professor for Neuroscience within the Department of Anatomy & Histology. In 2012 he also took on the role of Convenor of the Centre for Neuroscience and heads the CNS Executive Committee. He was appointed Head of Anatomy & Histology in April 2014.



KEY CONTRIBUTOR:
NEUROSCIENCE AND NEUROCOGNITION

# **Associate Professor Stuart Brierley**

Matthew Flinders Research Fellow in Gastrointestinal Neuroscience

Associate Professor Stuart Brierley is an NHMRC RD Wright Biomedical Fellow (CDF II) and Director of the Visceral Pain Research Group, located at the South Australian Health and Medical Research Institute (SAHMRI). He is also Deputy Director of the Hopwood Centre for Neurobiology (SAHMRI).

Stuart is an international leader on the brain-gut axis and how its function is altered in acute and chronic pain. His research comprises basic and translational science investigating the causes and cures of chronic abdominal pain relevant to gastrointestinal disorders such as Irritable Bowel Syndrome (IBS) and Inflammatory Bowel Disease (IBD). His recent research interests extend to other common causes for visceral pain including interstitial cystitis/painful bladder syndrome and endometriosis and how cross-organ sensitisation can potentially explain co-morbidities in these patients.

He has a proven track record in coordinating multi-faceted research programs for high-impact publications in journals such as Nature, Cell, Nature Communications, Gastroenterology, Gut, PNAS, JCI Insights, Pain, British Journal of Physiology and the Journal of Neuroscience



KEY CONTRIBUTOR:
NEUROSCIENCE AND NEUROCOGNITION

# **Professor Geraint Rogers**

Matthew Flinders Fellow/Director SAHMRI Microbiome Research

College of Medicine and Public Health

Professor Geraint Rogers is a molecular microbiologist and microbial ecologist. Geraint is Programme Leader for the Microbiome & Host Health Theme of the South Australian Health and Medical Research Institute (SAHMRI). He is an NHMRC Senior Research Fellow and holds a Matthew Flinders Research Fellowship.

Geraint's work focuses on the role of the human microbiome on the regulation of human physiology, susceptibility to disease, and treatment efficacy, spanning a broad range of clinical contexts, including neurophysiology.

Geraint has received international recognition for his research, which has included publications in journals such as Lancet, Molecular Psychiatry, Lancet Infectious Disease, Lancet Respiratory Medicine, Gut, ISME Journal, and Clinical Infectious Diseases. His work has attracted substantial Category 1 funding, including recent funding from the Medical Research Future Fund.

The research conducted by Stuart and Geraint has important applications in the co-occurrence of physical and mental health problems.







# The Órama Institute

Most people are affected by mental health and wellbeing issues at some point in their lives either directly or as family, friends, loved ones, carers and supporters.

The Órama Institute is dedicated to co-designing solutions to benefit end users and those with lived experience and carers.

We are inspired by the strength of those whose lives we seek to improve and the opportunity to create and sustain meaningful change.

FOR MORE INFORMATION VISIT:

flinders.edu.au/mental-health

PROUDLY SUPPORTED BY

