## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>3</td>
</tr>
<tr>
<td>Melbourne Neuropsychiatry Centre</td>
<td>4</td>
</tr>
<tr>
<td>About Us</td>
<td>4</td>
</tr>
<tr>
<td>Organisational Chart</td>
<td>5</td>
</tr>
<tr>
<td>Research Stream Profiles</td>
<td>6</td>
</tr>
<tr>
<td>Psychosis and Developmental Neuropsychiatry</td>
<td>6</td>
</tr>
<tr>
<td>Clinical Neuropsychiatry</td>
<td>8</td>
</tr>
<tr>
<td>Depression &amp; Anxiety Neuroscience</td>
<td>10</td>
</tr>
<tr>
<td>Social and Affective NeuroDevelopment</td>
<td>11</td>
</tr>
<tr>
<td>Systems Neuropsychiatry</td>
<td>12</td>
</tr>
<tr>
<td>Gene-Environment Neuropsychiatry</td>
<td>13</td>
</tr>
<tr>
<td>Performance Indicators</td>
<td>14</td>
</tr>
<tr>
<td>Research Output &amp; Impact</td>
<td>14</td>
</tr>
<tr>
<td>Funding</td>
<td>15</td>
</tr>
<tr>
<td>Supervision &amp; Teaching</td>
<td>16</td>
</tr>
<tr>
<td>Knowledge Transfer</td>
<td>16</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>17</td>
</tr>
<tr>
<td>Publications 2012-present</td>
<td>18</td>
</tr>
</tbody>
</table>
The Melbourne Neuropsychiatry Centre (MNC) was officially launched in 2004 as a joint centre of The University of Melbourne and Melbourne Health. Since its inception, MNC has been tremendously successful in bringing together an outstanding team of research active clinical academics, clinicians, and scientists from various disciplines, as well as professional staff, to advance our knowledge and treatment of neuropsychiatric conditions.

The clinical-research interface is at the heart of MNC and is reflective of the strong partnership that exists between the Department of Psychiatry at The University of Melbourne and the NorthWestern Mental Health Program of Melbourne Health. Professors Christos Pantelis and Dennis Velakoulis have attracted a highly talented group of people that has led to new discoveries in schizophrenia and other psychoses, mood and anxiety disorders, and disorders of brain development and brain degeneration. The Centre’s work is internationally recognised and is already contributing to better outcomes for the patients they treat. These successes have been possible through the generous support from Melbourne Health (NorthWestern Mental Health), The University of Melbourne, the Department of Health and Human Services, and the Florey Institute for Neurosciences and Mental Health.

Over the past five years, in particular, the Centre has recorded a remarkable level of achievement. It has been awarded 7 highly competitive NHMRC Fellowships, including a Senior Principal Research Fellowship (Prof Pantelis) and 4 recent Career Development Fellowships (CDFs; Drs. Zalesky, Harrison, Whittle, Bousman). Importantly, in 2016, The University of Melbourne submitted 41 applications for CDFs, and 3 of the 8 CDFs awarded at the university were at MNC. This is a fabulous effort. The Centre’s level of research output and impact over the past five years has also been impressive. They have recorded 600 research publications since 2012, with their average publication citation rate performing well above the University average. Their citations are equally impressive, with Prof Pantelis being listed in Thomson Reuter’s top 1% of the most highly cited in his field each year since 2014.

MNC represents a shining example of a research centre that delivers outcomes at an international level and which raises the profile of my Department and the university. I am delighted to support MNC as a key centre in the Department of Psychiatry, focussed on delivering the best outcomes for patients with severe mental disorders and disorders of neurodevelopment. It has been a pleasure to be part of the centre’s Management Committee, and to work closely with a number of researchers from MNC. While my new role going forward will be as Dean at the Institute of Psychiatry in London, my ongoing collaboration with Prof Pantelis, Prof Velakoulis and their teams will continue going forward, with a number of collaborative efforts already established or planned. I will continue to follow the work of this impressive centre, which continues to lead the field in many areas of mental health research.
Melbourne Neuropsychiatry Centre

About Us
Melbourne Neuropsychiatry Centre (MNC) was established in 2004 with the appointment of Christos Pantelis as Foundation Professor in Neuropsychiatry at The University of Melbourne. Since that time, MNC has established its reputation as one of the most productive psychiatric research Centres in Australia. The team at MNC currently consists of 11 salaried academic staff, 6 professional staff. At any given time MNC supports over 30 individuals who work with the research streams at the Alan Gilbert Building as stipend funded PhD students, Masters and Honours students, and international research fellows.

MNC has maintained a core research focus on understanding the neurobiology of psychosis and other neurodevelopment disorders (incl. autism spectrum disorders), following on from its seminal work identifying progressive changes at transition to a psychotic illness (Pantelis et al, Lancet, 2003). It has also developed core overlapping research interests in the area of epilepsy and neurodegenerative disorders (Velakoulis et al.); depression and anxiety (Harrison et al., Whittle et al.); advanced brain network science (Zalesky et al.) and psychiatric genetics and genomics (Bousman et al.).

MNC is a joint Centre of The University of Melbourne and Melbourne Health. It brings together clinical and research teams at Sunshine and Royal Melbourne Hospitals, with a dedicated brain imaging archive and analysis laboratory located at the University’s Parkville campus.

Organisational Chart

Scientific Director: Prof Christos Pantelis
Clinical Director: Prof Dennis Velakoulis
Deputy Scientific Director: A/Prof Ben Harrison

Parkville (UoM) / RMH (NWMH)
Research
PSYCHOSIS AND DEVELOPMENTAL NEUROPSYCHIATRY
Prof. Christos Pantelis
Deputy: Dr Vanessa Cropley

CLINICAL NEUROPSYCHIATRY
Prof. Dennis Velakoulis
Deputy: A/Prof Mark Walterfang

DEPRESSION AND ANXIETY NEUROSCIENCE
A/Prof. Ben Harrison
Deputy: A/Prof Chris Davey

SOCIAL AFFECTIVE NEURODEVELOPMENT
A/Prof. Sarah Whittle
Deputy: Dr Julian Simmons

SYSTEMS NEUROPSYCHIATRY
Dr. Andrew Zalesky

GENE-ENVIRONMENT NEUROPSYCHIATRY
Dr. Chad Bousman

Operations

Barbara Stachlewski
PA to Scientific Director

Yvonne Staimle
Business Manager (EFT 0.6)

Chester Kang
Lab Manager & Analyst (EFT 0.5)

Neuroimaging Laboratory

Sunshine Hospital (NWMH & UoM)
Adult Mental Health Rehabilitation Unit (AMHRU, NWMH)
Prof Christos Pantelis
Deputy: Dr Naveen Thomas

WCHRE (UoM)
Prof Christos Pantelis & A/Prof Ben Harrison
Dr. Chad Bousman

Barbara Stachlewski
PA to Scientific Director

Yvonne Staimle
Business Manager (EFT 0.6)

Chester Kang
Lab Manager & Analyst (EFT 0.5)
Psychosis and Developmental Neuropsychiatry

Stream leader: Prof. Christos Pantelis, MB BS, MD (Melb), Hon MD (Athens), MRCPsych, FRANZCP

Deputy: Dr Vanessa Cropley

The stream’s goal is to understand the neurobiological basis of disorders emerging in childhood and adolescence, including psychotic disorders. They are located at MNC Parkville and MNC Sunshine. Primary local collaborators include the Centre for Neural Engineering; The Florey Institute of Neuroscience and Mental Health; Orygen – The National Centre of Excellence in Youth Mental Health; and Monash Institute of Pharmaceutical Sciences (MIPS). Over the past 5 years they have published over 140 peer-reviewed research articles (19368 citations). Highlights include:


Stream leader profile

Appointment: Prof. Pantelis holds current appointments as NHMRC Senior Principal Research Fellow (since 2010), Foundation Professor of Neuropsychiatry and Scientific Director, MNC (2004–), Honorary Adjunct Professor, Centre for Neural Engineering (CNE; 2015–), Honorary Senior Research Fellow, Bedfordshire Centre For Mental Health Research in Association with the University of Cambridge (UK; 2013–), Honorary Professorial Fellow, Florey Institute for Neuroscience & Mental Health (2004–), Principal Specialist, Adult Mental Health Rehabilitation Unit (AMRHU), Western Hospital Sunshine, North Western Mental Health Program, Melbourne Health (2000–).

Funding: Prof. Pantelis and his team have received >$45M in competitive research funding, including 22 NHMRC/ARC grants since 1994, incl: 4 current project grants; 3 current international collaborative EU-NHMRC grants; national NHMRC Enabling Grant that established the Australian Schizophrenia Research Bank (ASRB; international resource; leading to a paper in Nature Neuroscience); 2 NHMRC Program Grants (2005-2013: $17.4M), focusing on emerging mental illness; Mental Health CRC ($23M direct funding; total >$70 M) examining biomarkers in neurodegeneration and psychosis. His NHMRC SPRF (held since 2010) was recently renewed (2016-20; $926,980).

Publications: Prof. Pantelis has 500+ publications, incl. 3 books. His work has been cited 32,811 times (h-index 98) with 26 papers cited more than 300 times. His seminal Lancet paper (Pantelis et al. 2003) describing progressive brain changes at psychosis onset has received 1117 citations. Chris has been consistently one of the most highly cited researchers in The University of Melbourne. In 2016, Prof Pantelis was one of 17 UoM researchers named on the Clarivate Analytics ‘Highly Cited Researchers’ list, which identifies scientists whose research — the top 1% — has had significant global impact within their respective fields (he has been in this list since 2014).

Profile: Prof. Pantelis’ work has been recognised with awards from the USA (NARSAD) and Germany (Justus Liebig University), among many others. In 2015, he was conferred a Doctor Honoris Causa (Honorary Doctorate) from the National and Kapodistrian University of Athens. He has delivered the prestigious UoM Beattie Smith Lecture (2012) and Danks Oration (2015). In 2013, he was invited to participate and speak at an NIMH workshop by the former Director of NIMH (Tom Insel), including a subsequent international working party on early psychosis. He gave the opening plenary of the (WFSBP) World Federations of Societies of Biological Psychiatry in 2015, and recent keynote talks at Universities in Cambridge, Germany, Switzerland and Netherlands.
He participates on 10 journal editorial boards and peer reviews for various medical, psychiatric and neuroscience journals and national/international grant bodies; recently appointed as Associate Editor to Psychological Medicine (2016-). He is also on the NHMRC Academy and involved in NHMRC peer review and Fellowships panels (incl. 2016/17); past board member of the Schizophrenia Research Institute (SRI, NSW), Mental Illness Fellowship (MIF, Vic); on SACs of Neurosciences Victoria, IMHRI (NSW), and Biogrid; member (inter)national research committees; Chair of Department of Psychiatry Research Committee (2011-2013). He has been elected to the Schizophrenia International Research Society (SIRS) Nominating Committee (2012-2018) and has been part of the SIRS conference organising committee and various organizing committees for national and international conferences (incl. 2015 & 2018 WFSBP, Athens & Copenhagen, respectively). In 2016, he and his wife, Kimberley, established the ‘Nicholas & Dimitra Pantelis Travelling Scholarship’ to support early career schizophrenia researchers.

**Supervision:** Prof. Pantelis has supervised/mentored >100 doctoral, postdoc and research staff (32 doctoral [11 current], >30 International Fellows), 6 becoming Professors (3 since 2010) and 8 A/Profs (4 since 2013). Since 2009, MNC researchers under his mentorship have been awarded >33 competitive fellowships (incl. 14 NHMRC/2 ARC/5 NARSAD).
Research Stream Profiles

Clinical Neuropsychiatry

Stream leader: Prof. Dennis Velakoulis, MBBS, Dip Crim, FRANZCP, MMed, DMed Sci

The stream is a multidisciplinary team including consultant neuropsychiatrists, neuropsychologists, occupational therapists, social workers, behavioural neurologists, training psychiatrists, resident medical officers and mental health and general medical nursing. They are based at the Neuropsychiatry Unit (NPU), John Cade Building, Royal Melbourne Hospital (MNC Royal Melbourne). The NPU is a state-wide specialist mental health service that offers neuropsychiatric assessment and advice to psychiatric, neurological and other medical and mental health services. The unit offers inpatient, outpatient, off-site and telemedicine assessments to other services across the state and the region. The unit has strong links to research in cognitive and clinical neuropsychiatry and training within the North-Western Mental Health Region and beyond. It is involved in a range of world-leading research endeavours, innovative educational programmes, and training of mental health clinicians to meet the future specialised mental health needs of the community. Over the past 5 years, they have published 90+ peer-reviewed research articles – highlights include:


Stream leader profile

Appointment: Prof. Velakoulis is appointed as Clinical Director of MNC (2005-), Director of the Neuropsychiatry Unit (NPU), Royal Melbourne Hospital (2001-) and Professor, Department of Psychiatry, The University of Melbourne (2012-). Following graduation from The University of Melbourne in Medicine, Prof. Velakoulis completed a Diploma of Criminology before successfully completing his Fellowship for the RANZCP and a Masters of Medicine in Psychiatry in neuroimaging. He received a Doctor of Medical Science degree in 2012. Prof. Velakoulis has maintained a full-time clinical role since 1997. He has held a 0.2 EFT academic position since 2006.

Funding: Prof. Velakoulis has been a chief investigator (CI) on more than 10 NHMRC grants (Total funding > $5M) and lead CI on two of these grants. He has also been a CI on non-NHMRC grants totaling over $4 million dollars. The breadth of these grants across psychiatry, neurology, human and animal studies reflects his collaborations with neuroscientists within and outside psychiatry.

Publications: Prof. Velakoulis has published 260+ peer reviewer articles, including publications in the highest ranked medical (*Lancet* – second author), neurological (*Lancet Neurology* – first author x 1, last author x 1, *Brain*) and all 6 of the highest ranked psychiatric journals. Of his publications, 13 (8%) papers have been published in journals with impact factor > 12.0 (8 as first, second or senior author) and 51 (30%) papers in journals with impact factor > 5.0. His h-index is 52 with 25 papers cited more than 100 times and 54 papers cited between 50 and 99 times (total 9090 citations).

Profile: Prof. Velakoulis has presented 60+ talks and workshops related to research and clinical activities, both nationally and internationally. He has assessed competitive grants and fellowships for major funding bodies, including the NHMRC. He has been an examiner for the Royal Australian and New Zealand College of Psychiatrists (RANZCP); Chair of the North Western Mental Health Research (2000-03) and ECT Committees (2005-10); Deputy Chair, Section of Neuropsychiatry, RANZCP (2006-10); Chair, Section of Neuropsychiatry, RANZCP (2010-current); and Deputy Chair, Victorian Psychosurgery Review Board.
Supervision: Prof. Velakoulis has supervised 17 University of Melbourne students (6 PhD, 11 Advanced Medical Sciences Medical students). The completed PhD and AMS projects have attained high grades with the completed PhD (A/Prof. Mark Walterfang) awarded for the Chancellor’s and Dean’s Prizes. Over the last fifteen years he has also developed a Neuropsychiatry service with a reputation for delivering teaching and education to clinicians and students across multiple disciplines and across geographic areas. This teaching is provided to medical specialists and trainees (psychiatry, neurology, geriatrics), nursing staff, allied health staff (neuropsychology, psychology, occupational therapy, speech therapy, art therapy) and students (medical, nursing, allied health) from multiple universities (The University of Melbourne, Monash University, Victoria University).

Neuropsychiatry

is the study of the brain in people suffering mental illness
Research Stream Profiles

**Depression & Anxiety Neuroscience**

*Stream leader:* A/Prof. Ben Harrison, PhD.

This stream’s aim is to develop experimental models based on affective neuroscience for treatment-oriented research and discovery in mood and anxiety disorders. They are located at MNC Parkville and MNC Sunshine. Primary local collaborators include: Orygen – The National Centre of Excellence in Youth Mental Health (Youth Mood Clinic) and Western Health Medical Imaging (Sunshine Hospital). Their work is primarily funded by NHMRC project grants and fellowships. Over the past 5 years they have published 70+ peer-reviewed research articles (3770 GS citations) – highlights include:


**Stream leader profile**

**Appointment:** A/Prof. Harrison is a research psychologist and neuroscientist who has specialised in the study of mood and anxiety disorders with neuroimaging. He is appointed as Associate Professor and Deputy Scientific Director of MNC. He received his PhD in 2006 and has been funded by NHMRC Fellowships since this time (1 ECF, 2 x CDFs). He currently holds a Clinical Career Development Fellowship (Level 2; 2017-21). He is also appointed as Honorary Principal Research Fellow at Orygen – The National Centre of Excellence in Youth Mental Health.

**Funding:** A/Prof. Harrison has been involved in securing $8M+ in competitive funding. Nationally, he has led/currently leads 2 NHMRC Project Grants and has performed/currently perform as a Chief Investigator on 3 others. He has also received 4 sole or joint Principal Investigator Grants from competitive schemes of The University of Melbourne, the Clive & Vera Ramaciotti Foundation (Perpetual Trustees) and Myer Family Foundation. Internationally, he has been a named chief/principal investigator on 10 competitively funded research projects.

**Publications:** A/Prof. Harrison has published 120 peer-review research articles to date (h-index 40, 4940 citations). Career publication highlights include 1st author articles in *PNAS* (234 citations), *Molecular Psychiatry* (47 citations in 12 months) and *JAMA Psychiatry* (317 citations). 17 of his publications have been cited 100+ times.

**Profile:** A/Prof. Harrison has been an invited Keynote speaker at national and international conferences and co-chaired numerous workshops and symposia. In 2016, he gave the Plenary lecture at the Annual Winter Conference on Brain Research (New Zealand). He has assessed competitive grants and fellowships for major funding bodies, including the NHMRC, Welcome Trust (UK), ANR (France), ZonMW (Netherlands), and Carlos III Institute (Spain). He has served on NHMRC Project Grant Review Panels. In 2017, he was appointed to the NHMRC Assigner’s Academy for Mental Health/Psychiatry. He has also served on the Grant Review Panel of the Society for Mental Health Research (SMHR), which allocates funding to early career researchers from the ABC’s “Mental As” campaign. A/Prof Harrison has been a member of the MNC Executive Committee since 2011; and was appointed its Deputy Scientific Director in 2017. He currently also Chairs the Research Subcommittee of the Department of Psychiatry.

**Supervision:** A/Prof. Harrison has supervised 3 post-doctoral, 5 PhD, 2 Masters and 5 Honours students to completion and hosted several international research fellows, including 2 international Endeavour Awardees and 3 stipend-funded clinical research trainees. Of his completed PhD students: one has received an NHMRC Early Career Fellowship; one a post-doctoral fellowship at King’s College London; and one a Spanish Government Early Career Fellowship.
Social and Affective NeuroDevelopment

Stream leader: A/Prof. Sarah Whittle, PhD.

The stream brings together neuroimaging and neuroendocrinology expertise, with an aim to characterise neurodevelopmental risk and resilience factors for common mental health problems in children and adolescents, particularly mental disorders such as depression and anxiety. They are located at MNC Parkville. Primary local collaborators include: Melbourne School of Psychological Sciences – The University of Melbourne, and the Murdoch Childrens Research Institute. Their work is primarily funded by ARC discovery grants, and NHMRC project grants and fellowships. Over the past 5 years they have published 80 peer-reviewed research articles (2182 GS citations) – highlights include:


Stream leader profile

Appointment: A/Prof. Whittle completed her PhD in 2007, and was awarded an ARC postdoctoral fellowship in 2008 to establish her research focus on neurodevelopment and mental health at Orygen, The National Centre of Excellence in Youth Mental Health. She was awarded an NHMRC CDF (Level 1) in 2012, which she took up at the MNC. She was promoted to Associate Professor in 2015 and was recently awarded an NHMRC CDF (Level 2; 2017-21). She has an honorary appointment in the Melbourne School of Psychological Sciences.

Funding: A/Prof. Whittle has been involved in attracting a total of over $6M successful grant funding. Of note, she has current CIA roles on one NHMRC project and one ARC discovery grant, and had a CIA role on a NARSAD grant from the US (2014-2015). She has had (or holds) CI roles on a further 7 NHMRC/ARC grants, and an AI role on one NHMRC grant, and has received funding from other sources including the Victorian Government, The University of Melbourne and the Murdoch Childrens Research Institute.

Publications: A/Prof. Whittle has published 95 journal articles/book chapters from 2006-2017 in general (e.g., PNAS) and specialty (e.g., American Journal of Psychiatry, *JAMA Psychiatry*, *Trends in Cognitive Sciences*) journals. Over 30 percent of A/Prof. Whittle’s publications are either in press or published in 2016/2017, illustrating an exponential increase in her research output. She has 2674 paper citations and a h-index of 28.

Profile: A/Prof. Whittle has been invited to speak at >30 national or international conferences. She was invited (and funded) to present at the Inaugural Brain Development Methodology workshop (April, 2016, USA) as an expert in the field. A/Prof. Whittle was a member of the NHMRC Research Translation Faculty 2012-2015. She has completed numerous manuscript reviews for international peer review journals and grant reviews for the NHMRC, ARC and Heart Foundation, and was appointed to the Editorial Board of *Psychological Medicine* in 2017. She was the founder and is currently the Treasurer of the Australasian Society for Social and Affective Neuroscience. She was on the organising committee for the Society’s annual meetings in 2014 and 2017. She has received the Research Australia Discovery Award (2009) for research that has demonstrated importance/impact. A/Prof. Whittle has been a member of two Human Research & Ethics Committees (2009-11: Orygen Youth Health; 2009-current: Melbourne Health). She has been a member of the MNC Executive Committee since 2011, and the Department of Psychiatry Community Engagement/Knowledge Transfer committee since 2016.

Supervision: A/Prof. Whittle has supervised 16 doctoral students to completion (2 Advanced medical science students, 6 Honours, 5 PhD, 5 Masters). All 5 completed PhD students are either currently in postdoctoral research roles (2 international, 1 national) or are working clinically. She currently supervises 11 graduate students and is a mentor to three postdoctoral research fellows.
Systems Neuropsychiatry

Stream leader: Dr. Andrew Zalesky, PhD.

The Systems Neuropsychiatry Stream aims to understand how different parts of the human brain interact with each other to produce complex behaviour and why these astonishingly complex interactions breakdown in individuals with serious mental illness. They model the brain in both health and disease using networks of interconnected neural elements that interact in time and space across a hierarchy of scales. They develop new methodologies to perform statistical inference on brain networks and undertake research into computational models that describe the emergence and progression of network pathology over the course of disease. Their aim is to discover new ways to prevent, treat and cure mental illness. The stream brings together a diverse range of expertise from basic science, engineering and psychiatry in order to tackle these aims using innovative, interdisciplinary approaches. They are located at MNC Parkville and their work is primarily funded by NHMRC and ARC Project Grants. Over the past 5 years they have published 60+ peer-reviewed research articles (4607 GS citations) – highlights include:


Stream leader profile

Appointment: Dr. Zalesky is a Senior Research Fellow at The University of Melbourne and holds a joint appointment in the Departments of Psychiatry and Electrical & Electronic Engineering. He completed his PhD in Electrical Engineering at UoM in 2007 and has been based at Melbourne Neuropsychiatry Centre since this time. He co-established Systems Neuropsychiatry in 2013 and now leads this research stream. Editorial appointments: Network Neuroscience (Assoc Editor), Brain Topography (Assoc Editor). He has served as guest editor for numerous journals, including Neuroimage and IEEE JSTP.

Funding: Dr. Zalesky has been awarded NHMRC Project Grants (>3, including CIA); ARC Discovery Projects (>2, including CIA). He has been continuously supported by ARC, NHMRC and other competitive fellowships since PhD completion, including 2014-17 NHMRC Career Development Fellowship; 2012 Inaugural Melbourne Neuroscience Institute Fellowship; 2009-11 ARC Postdoctoral Fellow; 2008 ARC Linkage International Fellowship; 2007 American-Australian Association Sir Keith Murdoch Fellowship.

Publications: Dr. Zalesky has co-authored 100+ papers in 10 years of postdoctoral research, which have cumulatively received 5000+ citations. 10 papers cited 100+ times. His 2010 “nodes paper” has become a classic in the field of connectomics, cited 500+ times in 5 years. In the last 5 years, he has published papers in PNAS (1st author), Brain (1st), JAMA Psychiatry (1st), American Journal of Psychiatry (1st), Biological Psychiatry (1st) and Nature Reviews Neuroscience (2nd).

Profile: Dr. Zalesky is internationally recognised for developing the network-based statistic, one of the most widely used methods for performing statistical inference on brain networks. His method is implemented in well-known software and its use is reported in 60+ published psychiatry papers. His contributions to neuropsychiatry include mapping of the schizophrenia connectome and development of advanced methods for analysing neuroimaging data. He coauthored ‘Fundamentals of Brain Network Analysis’, one of the best-selling Elsevier neuroscience titles published in 2016. Awards: 2016 Aubery Lewis Award for research excellence and leadership in biological psychiatry. 2014 Young Tall Poppy Award for excellence in science communication. 2011 Ziskind-Somerfeld finalist for most highly cited paper in Biological Psychiatry.

Supervision: Dr. Zalesky co-established and now leads Systems Neuropsychiatry, a multidisciplinary research team comprising 2 postdocs and 7 PhD/Masters students. In last 5 years, 7 postdocs/psychiatrists from abroad have chosen to bring their brain imaging data to Melbourne to learn how to analyse it with methods he has developed. He leads several initiatives in connectomics training, including 2017 Australian Connectome Summer School and teaching at bioinformatics schools in Malaysia (2017), Switzerland (2016) and Netherlands (2015).
Gene-Environment Neuropsychiatry

Stream leader: Dr. Chad Bousman, MPH, PhD

The stream’s objective is to advance precision psychiatry via the interrogation of gene by environment (including drug) interactions relevant to the onset, course, and treatment of schizophrenia and depression. They are located at MNC-Parkville but include members located within the Melbourne Brain Centre and Royal Melbourne Hospital. The work is primarily funded by the CRC in Mental Health, NHMRC fellowships, and philanthropic grants (e.g., LEW Carty Foundation). In the past 5 years, they have been highly productive and the stream is being recognised as emerging leaders in the field – highlights include:


Stream leader profile

**Appointment:** Dr. Bousman received his Master in Public Health in 2003 from San Diego State University and a PhD in genetic epidemiology from the University of California-San Diego in 2009. He is currently appointed as Senior Research Fellow and NHMRC Career Development Fellow (Level 1, 2017-21). He also holds Honorary Research Fellow appointments within the Department of General Practice and Florey Institute of Neuroscience and Mental Health at The University of Melbourne.

**Funding:** Dr. Bousman has been a lead investigator on 8 competitively awarded international and national research applications securing over $1M (AUD). In addition, he has contributed to obtaining over $3M in funds as a co-investigator on international (eg. NIH) and national (eg. NHMRC, Abbott) research projects. Dr. Bousman is a past recipient of a NARSAD Young Investigator Award (2014-2016) and the prestigious Ronald Phillip Griffith Fellowship (2013-2016) from the FMDHS. He was a past recipient of one of only 10 inaugural McKenzie Post-Doctoral Fellowships (2010-2013) that were established to attract outstanding postdoctoral students to The University of Melbourne.

**Publications:** Dr. Bousman has been a lead investigator in 85 publications (peer-review publications=67; h-index = 17; i10-index=28; citations = 838). His psychiatric genetics work, has identified promising genetic biomarkers for transition to psychosis among individuals defined as ultra high risk for psychosis as well as genetic pathways linked to schizophrenia. His pharmacogenetics work, has identified genetic markers associated with antidepressant response, which recently aided the development of a commercial pharmacogenetic-based decision support tool for antidepressant dosing (CNSDose®). In addition, Dr. Bousman was recently made a member of the Clinical Pharmacogenetics Implementation Consortium, an international group of scientists, clinicians, and industry partners with the goal of translating pharmacogenetic tests into clinical practice.

**Profile:** Dr. Bousman has been invited to speak at 7 international meetings and received sponsored travel to speak at the American College of Neuropsychopharmacology and the International College of Neuropsychopharmacology meetings. He represented Australia in the 2012 Australia-China Young Researchers Exchange Program sponsored by the Australian Department of Industry, Innovation, Science, Research and Tertiary Education and the Chinese Ministry of Science and Technology. He also has received a Young Investigator Travel Award from the USA National Institute on Drug Abuse to attend the World Congress on Psychiatric Genetics. He is an Associate Editor for Frontiers in Psychiatry. Dr. Bousman is the coordinator of the Honours and RHD programs and serves on three committees (Education, Knowledge Partnerships, Research-sub) within the Department of Psychiatry.

**Supervision:** Dr. Bousman currently supervises 6 PhD students, 1 MD student, and oversees a research stream comprised of 6 students and/or research assistants. He has provided research mentoring to 24 undergraduate and 7 PhD students. He has successfully supervised 2 undergraduate, 1 Masters, 3 PhD, and 1 MD students. He has co-published articles or abstracts with 60% of the students that he has mentored/supervised. All students have successfully completed their degree or are currently in good standing.
Research output & impact

Since its inception, MNC has published 1000+ peer-reviewed journal articles (25,200 total citations). Over half of these publications (550+) have occurred in the last 5 years – with the Centre maintaining a strong upward trajectory in its growth of publication output. The ‘impact plot’ below illustrates the growth of research citations for Centre-affiliated peer-reviewed articles to have occurred since 2004. Currently, the Centre averages 24 citations per article, which is well above the University average. A full list of the Centre’s research publications (2012-current) can be found in the appendix and on its website:

www.psychiatry.unimelb.edu.au/mnc

Fig. 1: Growth of citations for MNC-affiliated peer-reviewed publications to have occurred since the Centre’s inception in 2004.

1000+ publications since Centre launch (2004)
100+ publications per year over past 5 years
25,200+ total citations, Centre h-index = 75
24 average citations per paper (UoM average is 18)
Funding

The total amount of research funding that has been directly administered by the Centre (UoM) over the reporting period (2012-current) is $7.3M, with an average yearly administration of $1.37M. The vast majority of this funding represents the administration of NHMRC project grants and fellowships.

In 2016, the Centre was awarded 3 highly competitive NHMRC career development fellowships ($1.4M, 2017-21: Harrison, Whittle, Bousman), adding to the SPRF awarded to Prof. Pantelis in 2015 ($926K, 2016-20). The Centre also administers three additional NHMRC fellowships, with renewal applications currently submitted to NHMRC.

Annualised breakdown of MNC research funding

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<tr>
<td>Total Income</td>
<td>$1,272,664.74</td>
<td>$938,670.40</td>
<td>$1,103,396.11</td>
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Supervision & Teaching

Since 2012, the Centre has averaged 2.4 PhD completions per year with an overall timely completion rate of 86%. MNC currently provides primary supervision for 35% (n=14) of the 39 PhD students enrolled within the Department of Psychiatry, with co-supervision for many others. MNC additionally provides co-supervision to students within the Melbourne School of Engineering and the School of Psychological Sciences. In addition to PhD supervision, on average, MNC provided primary supervision to one Melbourne Medical School Scholarly Selective student and two Honors students per year. At completion of their degrees, a majority of our students have been successful in obtaining prestigious post-doctoral funding or clinical placements both nationally and internationally.

Prof. Pantelis supervises trainees in psychiatry and is involved in teaching psychiatry to medical students. He is also a Course Coordinator for the M. Med. (Psychiatry) for The University of Melbourne. This position involves supervision and the teaching of research skills to trainees in psychiatry as part of their final (dissertation) year in psychiatry. Dr Bousman is involved in teaching psychiatric genetics within the Master of Psychiatry course at The University of Melbourne. A/Prof Whittle has developed and conducted 1 to 6 guest lectures per year (from 2007 to 2016) for second and third year undergraduate subjects in the Melbourne School of Psychological Sciences, The University of Melbourne.

Knowledge transfer


Prof. Pantelis travels frequently nationally and internationally to represent the Centre and The University. Since 2012, he has participated in almost 100 speaking engagements at major conferences, workshops and Institutes. The Centre’s other stream leaders have also participated in 100+ speaking engagements over the past 5 years, including several invited Keynote and Plenary presentations.

Prof Pantelis has provided regular lectures on the neurobiology of schizophrenia across the country, including webinars to for on-line courses in psychiatry.

The Centre has also established a profile of broader community engagement. For example, Dr. Zalesky has been a guest speaker at school science days organised by Quantum Victoria in 2015 aimed at raising mental health awareness. Dr. Bousman is a participating scientist in the Scientists in Schools Program, an Australian Government Initiative run by CSIRO. He also serves as a mentor for year 11 students enrolled in the Elizabeth Blackburn School of Sciences at the University High School in Melbourne. MNC provides week-long work experience placements for high-school students interested in neuropsychiatry and related fields.

MNC has formed close public links with the Greek community in Melbourne as well as Athens and established the first Greek-Australian travelling fellowship in Neuropsychiatry in 2016. The inaugural fellow, Stefanos Dimitrakopoulos, arrived in August 2016. As part of the fellowship launch MNC held a free Public Lecture titled ‘Psychological Impact of the Economic Crisis on the Greek Population’ given by Prof Nikos Stefanis (National & Kapodistrian University of Athens) and Ms Rika Zoula-Vayianni (26 Nov 2015).
Acknowledgements

The Centre gratefully acknowledges continued funding support from The Department of Psychiatry, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne and Melbourne Health (North Western Mental Health Programme). The Centre acknowledges competitive funding support from the Australian NHMRC and ARC, to which it has a consistent track record of funding success.

In December 2015, The Centre established the first Greek-Australian Travelling Fellowship in Neuropsychiatry – a collaborative initiative between Melbourne Health and The University of Melbourne. The Centre thanks Servier Laboratories Australia and their European office for funding the first of these fellowships for a 6-month period. We gratefully acknowledge the support of those who contributed philanthropic funding to this fellowship via the Melbourne Health crowd-funding initiative, which can be found here:


Lastly, the Centre acknowledges all past members, students, visiting fellows and research participants who have contributed enormously to its research vision, productivity and culture. They are all part of the extended MNC family.

Each day brings us closer to new discoveries about the neuroscience of mental illness
Research Funding Spanning 2012 to 2017

NHMRC Fellowships

2017-2020 Career Development Fellowship (CDF Level 2) to Ben Harrison. Title: Depression and Anxiety Neuroscience. $470,144.

2017-2020 Career Development Fellowship (CDF Level 2) to Sarah Whittle. Title: Neurodevelopmental risk factors for depression from childhood to early adulthood. $470,144.

2017-2020 Career Development Fellowship (CDF Level 1) to Chad Bousman. Title: Pharmacogenetics of antidepressant response and remission: toward genotype-guided prescribing in major depressive disorder. $425,048.

2016-2020 Senior Principal Research Fellowship renewed (SPRF; ID: 1105825) to Christos Pantelis. “Neurobiological ‘risk’ and ‘resilience’ biomarkers of severe mental illness”. $926,980.


2014-2017 NHMRC Career Development Fellowship (CDF) to Andrew Zalesky. Title: Mapping the connectome in schizophrenia. $397,724.

NHMRC Project Grants


2014-2016 ID: 1067040. Erythrocyte Membrane Fatty Acid Concentrations and Myelin Integrity in Young People at Ultra-High Risk of Psychosis. CIs: Paul Amminger, Chris Pantelis, Tom Whitford, Sarah Whittle, Alex Fornito, Daniel Hermen $390,879.


2014-2016 ID: 063383. Kava for the treatment of generalized anxiety disorder. CIs: Jerome Sarris, Con Stough, Andrew Scholey, Chad Bousman. $658,539.


2013-2016 ID: 1048222. The Efficacy of Adjunctive S-Adenosyl Methionine (SAME) versus a Combination Nutraceutical in Clinical Depression: A Double-Blind, Randomised, Placebo-Controlled Trial. CIs: Jerome Sarris, Issac Schweitzer, Con Stough, Chad Bousman. $774,264.


NHMRC Program Grants


NHMRC-European Union (EU) Collaborative Research Grants (FPT)


NHMRC Centres for Research Excellence (CRE)


Department of Industry Co-operative Research Centre (CRC) grants


ARC Discovery Projects


2012-2014  ID: DP120101402 - Early puberty and brain development: exploring the neurobiology of adolescent mental health. CIs: N Allen; Sarah Whittle; G Patton; P Dudgeon; C Pantelis; C Olsson; S Wood. $280,000.

Other Funding


2017 Society for Mental Health Research project grant. Characterising cross-diagnostic cognitive subgroups in schizophrenia and bipolar disorder. CI: Tamsyn Van Rheenen. $20,000.
Research Funding
Spanning 2012 to 2017
continued...


2016  The University of Melbourne, Faculty Research Fellowship to Chad Bousman. Investigating growth factors and related proteins as peripheral biomarkers of psychosis symptom severity. $130,000.

2016  Melbourne Health Research Funding Program (Royal Melbourne Hospital Home Lottery Research Grant) (ID: GIA-030H2016), Royal Melbourne Hospital Grant in Aid - Investigating glutamate dysregulation in relation to brain structure and inflammation in schizophrenia. CIs: Pantelis C, Cropley, V., Moffatt, B., Laskaris, L., Di Biase, M., Desmond, P., Ordidge, R. $25,000.

2016  The University of Melbourne Research Grant Support Scheme. Sarah Whittle. $44,542.


2015  Melbourne Health Research Funding Program (Royal Melbourne Hospital Home Lottery Research Grant) (ID: GIA-022-2015), Royal Melbourne Hospital Grant in Aid - Investigating immune dys-regulation in different stages of schizophrenia. CIs: Christos Pantelis, Vanessa Cropley, Gursharan Chana, Liliana Laskaris, Ian Everall. $25,000.

2015  Western Health Research Grant - Pilot trial investigating the use of cannabidiol as an adjunctive treatment in patients with chronic psychotic disorder. CIs: Christos Pantelis, Mahesh Jayaram, Naveen Thomas, Michael McDonough, Nadia Solowij, Murat Yucel, Chad Bousman, B Roberg, Antonia Merritt. $10,000.

2014-2017  Australian Rotary Health Ian Scott PhD Scholarship in Mental Health to Maria di Biase. Fellowship title: Sensitivity to the environment: Risk and resilience for adolescent depression. $100,000.


2014–2017  Australian Rotary Health Ian Scott PhD Scholarship in Mental Health to Maria di Biase. Fellowship title: Sensitivity to the environment: Risk and resilience for adolescent depression. $100,000.

2014-2016  2013 NARSAD Young Investigator Grant from the Brain & Behavior Research Foundation, to Chad Bousman. Title: Development of a gene-based classifier for the diagnosis of schizophrenia; co-investigators: Christos Pantelis, Stan Skafidas, Ian Everall. $53,680.

2014-2016  2013 NARSAD Young Investigator Grant from the Brain & Behavior Research Foundation, to Vanessa Cropley. Title: Investigating the dopaminergic basis of dysregulated frontostral circuitry in psychosis: A PET [18F]FDOPA and resting-state functional imaging study; co-investigators: Alex Fornito, Christos Pantelis. Total: $60,000

2014-2017  University of Melbourne. International Research and Research Training Fund. Melbourne-Peking Joint Centre for Psychiatric Research and Training. Everall IP, Bousman CA (CoI), Ng C. $291,000.


2014  Murdoch Childrens Research Institute Population Health theme funding grant. Title: The role of maternal history of mental disorder in fetal brain development and infant emotional regulation. Craig Olsen, Sarah Whittle, Marc Seal. $37,204.


2012-2014 University of Melbourne 2012 Early Career Researcher (ECR) award (ID: 601253) to Vanessa Cropley (Mentor: Christos Pantelis). Neuroinflammation in schizophrenia relapse: a pilot PET study.  $38,250

2012-2013  Melbourne Research Interdisciplinary Seed Funding Scheme – BIO21 - e Melbourne Birth Cohort; Cls: Fiona Judd, Ian Everall, David Castle, Penny Sheehan, Chad Bousman, Christos Pantelis. $40,000.

2012-2014  Australian Rotary Health Geoffrey Betts Postdoctoral Fellowship to Dr Sarah Whittle. Fellowship title: Sensitivity to the environment: Risk and resilience for adolescent depression.  $225,000.


2011-2012  Faculty of Medicine, Dentistry and Health Sciences (MDHS) Research Grants Support Scheme (FRGSS) The University of Melbourne. “A novel neuroimaging phenotype for anxiety disorder research”. Cl: Harrison BJ. $45,000.


2011-2012  NARSAD Distinguished Investigator Grant from the Brain & Behavior Research Foundation in the US, to Christos Pantelis. (US; Grant ID: 18722) “Neuroimaging Biomarkers of Psychosis Onset” - PET study examining inflammatory markers (microglial activity) in the CNS of patients developing acute psychosis.  $100,000.

2011-2012  Inaugural Melbourne Neuroscience Institute Fellow, University of Melbourne, to Andrew Zalesky. Title: Neurobiological markers for machine-guided diagnosis in psychiatry.  $50,000.

2010-2014  AVEC (international grant) - Efficacy of Lithium as an adjunctive therapy to antiretroviral regimens in treating HIV associated Mild Neurocognitive Disorder (MND); Cls: Everall, I., Bousman, C., Chana, G., Wright, E., Brew, B., Cysique, L., Pantelis, C., Letendre, S., Atkinson, H., Cherney, M. & Grant, I. $78,365.
Research Publications
Jan 2012-April 2017

2012


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2014


2015


2016


Overview | Melbourne Neuropsychiatry Centre 47


2017 (January to April)


575. Overview | Melbourne Neuropsychiatry Centre


