

**INSTITUTE OF PSYCHIATRY,
PSYCHOLOGY & NEUROSCIENCE**

KING'S
College
LONDON

IoPPN Research Festival 2019

Impact through innovation

13.00 – 16.30 Tuesday 30 April 2019

We are pleased to welcome you to the inaugural IoPPN Research Festival, our new showcase of exciting and innovative research from across the entirety of the Institute of Psychiatry, Psychology & Neuroscience (IoPPN).

This year's festival features two keynote talks from Professor Sir John Strang and Professor Ulrike Schmidt, alongside 24 five-minute talks from researchers at all levels from student to professor, as well as the professional services staff who support our work. Not only will you have a unique opportunity to experience some of the incredibly varied work being carried out at the IoPPN, but you will also see the festival's theme of 'Impact through Innovation' running throughout the talks like a connecting thread.

Crucially, we would also like you to see this as an occasion for networking and to inspire collaboration. You will have the opportunity to speak with presenters during the coffee break and the reception afterwards, as well as with colleagues across the IoPPN.

The IoPPN Research Festival is a celebration of the excellence, inclusivity and collaboration that makes the IoPPN such a wonderful institution for working and studying.

A lot of hard work has gone into organising this event, and we would like to thank the organising committee of Annicka Ancliff, Chris Albertyn, Ewan Carr, Josephine Mumford, Louise Pratt, Marija-Magdalena Petrinovic and Robin Maginn; and all members of the RIC, and Press & Communications Department, who offered their guidance and support.

We hope you will all enjoy the afternoon.



Professor Ian Overall
Executive Dean of the
Institute of Psychiatry,
Psychology & Neuroscience



Professor Thalia Eley
Chair of the Research
& Innovation Committee



Dr Paolo Deluca
RIC Lead for
IoPPN Research Festival

Event programme

All talks and presentations take place in the IoPPN Wolfson Lecture Theatre (IoPPN Main Building, Denmark Hill Campus).

13.00	Welcome <i>Professor Ian Everall, Professor Thalia Eley and Dr Paolo Deluca</i>	
13.10	Presentation of awards <i>Professor Ian Everall</i>	
13.25	Keynote <i>Professor Sir John Strang</i>	Preventing deaths from heroin/opioid overdose: new thinking, experimental testing, policy influence and lives consequently saved
13.45	<i>Dr Claire Troakes</i>	Banking on brains: tissue donation for neuroscience research
13.50	<i>Professor Benedikt Berninger</i>	Brains in metamorphosis: reprogramming cell identity within the central nervous system
13.55	<i>Dr Vanessa Lawrence</i>	Qualitative methods and intervention studies: moving service users' experiences centre stage
14.00	<i>Dr Christoph Mueller</i>	How routinely collected data can improve dementia care
14.05	<i>Dr Stephanie Forkel</i>	Public outreach: the story behind an image
14.10	3 Minute Thesis finalist	
14.15	<i>Professor Alan Simpson</i>	Innovation, impact and improvements in mental health care
14.20	<i>Dr Debbie Robson</i>	Implementing smoke-free policies in mental health settings
14.25	<i>Dr Kris De Meyer</i>	The Justice Syndicate: combining interactive theatre with psychology teaching and research
14.30	<i>Professor Louise Arseneault</i>	With a little help from my friends: social relationships and their impact on mental health and wellbeing
14.35	<i>Dr Sameer Jauhar</i>	Sailing close to the wind of psychotic fire: a dopamine journey
14.40	<i>Professor Corinne Houart</i>	Evolutionary risk taking in brain development
14.45	<i>Coffee break</i>	

15.10	Keynote <i>Professor Ulrike Schmidt</i>	The story of FREED: a service-level innovation, its implementation and emerging impacts
15.30	<i>Robin Bisson</i>	Hitting the headlines – maximising impact through media exposure
15.35	<i>Dr Marta Di Forti</i>	Heavy cannabis use contributes to the high rates of psychotic disorders in London and Amsterdam
15.40	<i>Dr Simone Fox</i>	The impact of qualitative research in multisystemic therapy for young people at risk of care or custody
15.45	<i>Dr Ioannis Bakolis</i>	The urban environment and mental health
15.50	<i>Dr Philippa Warren</i>	Drawing breath after spinal cord injury
15.55	3 Minute Thesis finalist	
16.00	<i>Professor Robert Plomin</i>	The DNA revolution
16.05	<i>Dr Penny Brown</i>	Fitness to plead on trial
16.10	<i>Dr Jemeen Sreedharan</i>	TDP-43 gains function due to perturbed autoregulation in a Tardbp knock-in mouse model of ALS-FTD
16.15	<i>Dr Katharine Rimes</i>	LGBT+ mental health research
16.20	<i>Dr Diana Cash</i>	Stressed rats and empathic mice: translational neuroimaging at The BRAIN Centre
16.25	<i>Professor David Veale</i>	Triple chronotherapy for the rapid treatment of depression
16.30	<i>Professor Matthew Hotopf</i>	Closing speech
<i>Followed by wine reception in the IoPPN canteen, 2nd Floor, IoPPN Main Building</i>		

Presentation of Awards 2018–19

November 2018

Early Career Research Awards – Institute of Psychiatry, Psychology & Neuroscience

Dr Yu-Tzu Wu – *Department of Health Service & Population Research*

Dr Matthew White – *Department of Basic & Clinical Neuroscience*

Early Career Research Award – NIHR Maudsley Biomedical Research Centre

Dr Christoforos Tsantoulas – *Wolfson Centre for Age Related Diseases*

Dr Radhika Kandaswamy – *Social, Genetic & Developmental Psychiatry Centre*

April 2019

Early Career Research Award – Institute of Psychiatry, Psychology & Neuroscience

Dr Marta Vila Pueyo – *Department of Basic & Clinical Neuroscience*

Dr Emily Burnside – *Wolfson Centre for Age Related Diseases*

Independent Researcher Award – NIHR Maudsley Biomedical Research Centre

Dr Joanna Milward – *Department of Addictions*

Dr Arjun Sethi – *Department of Forensic & Neurodevelopmental Sciences*

Departmental prizes for early career researchers

King's Award for Outstanding Contribution to the Research Staff Experience 2018

Department of Health Service & Population Research Christmas awards 2018

- Rising Star in Research
- Rising Star in Education
- PhD Student of the Year
- Citizenship

Department of Psychosis Studies Departmental Prizes 2018

- PhD of the Year
- Paper of the Year

Social, Genetic & Developmental Psychiatry Centre departmental prizes

- Post-doc Prize for Impact Beyond Academia

If your department organises any departmental prizes for early career researchers, please do let us know and we can announce them at next year's festival.

Spotlight on: 3 Minute Thesis

The Three Minute Thesis (3MT) celebrates the diverse research conducted by PhD students globally, and was established with a view to developing students' research communication skills. The challenge of explaining your thesis in just three minutes, and in a way that is accessible to a non-specialist audience, is a worthwhile training opportunity which helps to fine-tune your presentation skills in a friendly and supportive atmosphere.

The IoPPN held their final heats for the 3MT in early April 2019, and we are pleased to have our two finalists present in this year's IoPPN Research Festival.

threeminutethesis.uq.edu.au/about



Keynote speaker

Professor Sir John Strang

Chair in the Psychiatry of Addictions
Head of Department of Addictions

Preventing deaths from heroin/opioid overdose: new thinking, experimental testing, policy influence and lives consequently saved

Synopsis

In this talk, Sir John will discuss his work on reducing deaths from opioid overdoses and the development and use of Naloxone in prevention. Opioid overdose deaths now exceed deaths for road traffic accidents. As a result, Sir John's work has covered new preventions including the development of 'take-home naloxone' which is now a public health strategy and is endorsed by the World Health Organisation and by the United Nations.

Sir John's talk will also cover their development of a naloxone nasal spray and the study of heroin overdose more carefully including the stigma associated with addictions and overdose.

Biography

Professor Sir John Strang is Head of the National Addiction Centre at the IoPPN, the leading UK and most productive European Addictions research group. He is also academic leader of the Addictions Clinical Academic Group within the King's Health Partners Academic Health Science Centre.

With over 500 addictions publications, Sir John has a special interest in policy formation and the relationship of research to the improvement of treatment and public policy. He has more than 35 years' experience in the treatment of addictions, research and policy fields, and has acted as lead clinician in charge of a wide range of innovative types of treatment response in community and residential settings.

He is one of only eight addictions researchers outside North America to have been identified, since 2000, by the Institute for Scientific Analysis as a 'Highly Cited Author' with citation rate in the 'top one half of one per cent of all publishing researchers in the last two decades'. In 2016, he received a Knighthood for services to medicine, addiction and public health.



Dr Claire Troakes

Brain Bank Coordinator
MRC London Neurodegenerative Diseases Brain Bank

Banking on brains: tissue donation for neuroscience research

Synopsis

The MRC London Neurodegenerative Diseases Brain Bank at the IoPPN is one of the largest brain banks in the UK, specialising in central nervous system tissue collection and neurodegenerative, neurological and psychiatric disease.

In her presentation, Claire will describe the history and reasons behind brain banking, before focusing on the Brain Bank here at the IoPPN and the samples we hold. The donation process and procedure for obtaining tissue will be discussed, and she will give an overview of progress and research over the last few years.

Biography

Claire Troakes received her BSc from the University of Southampton, and completed the MSc Neuroscience degree at the IoPPN. She then undertook a Neuroscience PhD at Newcastle University. Claire is currently the Coordinator of MRC London Neurodegenerative Diseases Brain Bank, dealing with all aspects of tissue donation, collection and distribution to researchers. Additionally, she conducts research into tissue banking methods and the pathology of neurodegenerative disease.



Professor Benedikt Berninger
Professor of Developmental Neurobiology
Centre for Developmental Neurobiology



Dr Vanessa Lawrence
Senior Lecturer in Qualitative Social Sciences
Department of Health Service & Population Research

Brains in metamorphosis: reprogramming cell identity within the central nervous system

Synopsis

In the adult mammalian brain, the birth of new neurons is restricted to very few regions, and hence most neurons that degenerate are not replaced. However, the brain harbours non-neuronal cells, so-called astrocytes, which share some features with neural stem cells during development. Yet, astrocytes do not give rise to new neurons under physiological or pathophysiological conditions.

A fascinating idea is to induce these astrocytes to leave their own cell lineage and to convert into new neurons. The challenge is to develop molecular strategies that allow reprogramming the original identity of an astrocyte into that of a neuron, and experimental evidence suggests that this may actually work. The hope is that, in the future, such strategies may help us to overcome the limited regenerative capacity of the central nervous system.

Biography

Benedikt is a developmental biologist by training. He completed his undergraduate studies at the University of Munich and did his dissertation at the Max Planck Institute for Neurobiology. After a postdoctorate at the University of California, San Diego, he returned to Germany to develop his current research line which focuses on physiological and induced generation of nerve cells in the adult brain. From 2012–2018 he was Professor for Physiological Chemistry at the University Medical Center Mainz.

In 2018 he became professor at the Centre for Developmental Neurobiology and joined the MRC Centre for Neurodevelopmental Disorders. Being raised in an artistic family, Benedikt places great value on imagination and open-mindedness in his research.

Qualitative methods and intervention studies: moving service users' experiences centre stage

Synopsis

This presentation will highlight some of the ways qualitative methods can be used to develop 'better' interventions that successfully impact on health care. Understanding individuals' interpretations and the meaning that phenomena have for people is key to understanding how they relate to interventions and trials. Value lies in grounding therapeutic interventions in the perspectives and lives of those who will use them and seeking to understand the successes and failures of complex interventions in real life contexts. Innovative qualitative methods, such as the use of audio diaries and participatory research, help to prioritise and understand the service users' experience, bringing them centre stage in trial design and the development of interventions that are fit for purpose.

Biography

Vanessa is Senior Lecturer in Qualitative Social Sciences. She conducts high quality applied qualitative research within the field of mental health. She uses rigorous methods to develop, evaluate and implement services and therapeutic interventions that are grounded in the priorities of service users and their families.

Current research focuses on using qualitative methods to develop acceptable, relevant and feasible interventions, specifically: management strategies for visual hallucinations in older adults; problem solving therapy in people with dementia; and Acceptance Commitment Therapy for older people with treatment resistant anxiety. Vanessa is affiliated with the King's Clinical Trials Unit and provides expert advice on applying qualitative methods in clinical trials across King's Health Partners.



Dr Christoph Mueller
Academic Clinical Lecturer
Department of Old Age Psychiatry



Dr Stephanie Forkel
Honorary Lecturer
Department of Neuroimaging



How routinely collected data can improve dementia care

Synopsis

The majority of patients with dementia suffer from additional long-term conditions such as, for example, heart disease or high blood pressure. However, patients with dementia and older people in general are often excluded from clinical trials making treatment recommendations for these chronic conditions difficult.

Christoph's research uses routinely collected data from the Clinical Record Interactive Search (CRIS) system to evaluate how beneficial certain treatments actually are in real world clinical settings. This includes medications which are prescribed to treat symptoms of dementia, but also others which, unbeknownst to the prescriber and patient, might influence the progression of dementia.

This presentation focuses further on patients suffering from dementia with Lewy bodies, a form of dementia which is especially difficult to treat as it presents with a wide range of both physical and mental health symptoms.

Biography

Christoph graduated from the University of Leipzig (Germany) in 2008. As part of his medical degree, he spent time at the University of Bergen (Norway) and the University of Alabama at Birmingham (USA). He was awarded an MD from the University of Leipzig for research on the interaction of pain receptors in the spinal cord. For an Improvement Leader Fellowship at the Collaboration for Leadership in Applied Health Research and Care Northwest London and an MSc at UCL, he researched the service needs of people who sustained a traumatic brain injury.

Since 2012, Christoph has been training to become an old age psychiatrist and was awarded an NIHR Academic Clinical Lectureship in Old Age Psychiatry at the IoPPN in March 2017, using routinely collected data to research dementia treatment and care.

Public outreach: the story behind an image

Synopsis

Science is an integral part of our culture and essential for the future development of society. As scientists, public outreach is a part of our responsibility to increase knowledge in the surrounding communities, pass effective policy, and give back to society.

However, over the past few years, society has expressed growing distrust of the scientific community. Science communication is effective in reducing this environment of distrust, and it is our privilege and our duty to educate the public.

Given the growing possibilities of science outreach beyond academia, Stephanie is exploring various vehicles of communication. Together with colleagues from other disciplines, she explores the use of 3D printing technologies and their applications in neurosciences. One of these projects reached far beyond academic and geographic boundaries after it received a Wellcome Trust Image Award in 2017. In this presentation, Stephanie will tell the story behind the image.

Biography

Stephanie is Honorary Lecturer at the IoPPN working on a Wellcome Trust-funded project studying the impact of brain connections on cognitive functions and recovery.

Her multidisciplinary background reflects her ongoing fascination with the brain and how our anatomy and behaviour are interrelated. As such, her doctoral and postdoctoral studies at King's College London and University College London have focused on neuroimaging predictors of cognitive recovery after stroke.

If science is to reach many people, it has to be understandable, and she is eager to share science far beyond academia using public talks, school visits, documentaries and 3D printing as vehicles to communicate.

Beyond her academic life, Stephanie had the great honour of joining the GSO Leadership Academy and the Lindau Nobel Laureate Meeting for Medicine or Physiology.



Professor Alan Simpson
Professor of Mental Health Nursing
Department of Mental Health Nursing



Dr Debbie Robson
Senior Post-Doctoral Researcher in Tobacco Addiction
Department of Addictions

Innovation, impact and improvements in mental health care

Synopsis

This presentation draws on three research programmes to illustrate how research has informed mental health policy and practice.

Safewards is an evidence-based intervention implemented in inpatient mental health units across the world to make wards safer and calmer. Alan will talk about how the involvement of mental health service users was central to the research and the success of the intervention.

Peer support workers are increasingly employed in mental health and other services. Alan will talk about how a pilot trial of peer support for people leaving mental health hospitals has influenced policy, practice and further research.

Care planning is central to community mental healthcare. Care plans should be developed in partnership with the service user and focus on their recovery. Alan will give a brief overview of a study on recovery-focused care planning and outline how the results have influenced a new national framework for community mental health services.

Biography

Alan Simpson joined King's College London as Professor of Mental Health Nursing in February 2019. He works in both the Health Service & Population Research Department in the IoPPN and Florence Nightingale Faculty of Nursing, Midwifery & Palliative Care, and with South London and Maudsley NHS Foundation Trust. Previously, he was Professor of Collaborative Mental Health Nursing at City, University of London and East London NHS Foundation Trust.

Alan is an experienced mental health nurse researcher currently developing a new programme of high-quality research with the aim of improving the delivery and experience of mental healthcare and mental health nursing across a range of service settings. His research is collaboratively developed and conducted with service users, carers, clinicians, service managers, academics and policy makers.

He has a rich and varied clinical background, a PhD in Coordinating Community Mental Healthcare, a BA(Hons) in Social Psychiatry and a Postgraduate Diploma in Counselling.

Implementing smoke-free policies in mental health settings

Synopsis

The introduction of smoke-free policies has challenged the longstanding smoking culture that has existed within mental health services for several decades. Smoke-free policies, including treatment for tobacco dependence, has the potential to transform the culture of mental health organisations, where poor physical health of service users is prevented rather than expected.

Debbie's talk will provide a brief overview of some of the collaborative work between the IoPPN and the South London and Maudsley NHS Foundation Trust around the implementation and evaluation of a comprehensive smoke-free policy. She will discuss some of the direct and indirect effects of implementing the policy.

Biography

Debbie has worked at the IoPPN since 2002. She is a mental health nurse and Senior Post-Doctoral Tobacco Addiction researcher with the Nicotine Research Group in the Department of Addictions. She is also part of the Collaboration for Leadership in Applied Health Research and Care (CLAHRC) South London.

Her early work at the IoPPN involved therapy and training, randomised controlled trials in medication management and qualitative studies about patients' experiences of antipsychotic medication. Her current role involves the development, implementation and evaluation of tobacco dependence treatment initiatives for people with a mental health condition and/or substance misuse disorder who smoke. She has developed online education courses and advanced skills training for treating tobacco dependence in mental health settings. Debbie is also involved in policy work, and she is a co-author of Public Health England commissioned reports about e-cigarettes and vaping.



Dr Kris De Meyer
Research Fellow
Department of Neuroimaging



Professor Louise Arseneault
Professor of Developmental Psychology
Social, Genetic & Developmental Psychiatry Centre

The Justice Syndicate: combining interactive theatre with psychology teaching and research

Synopsis

The Justice Syndicate is part interactive theatre/ part psychological research tool – with impact at its heart. It aims to give members of the public an experience of the insights that exist in psychology and neuroscience about how people form opinions, disagree with one another, and how we reason alone and in groups. It also offers new opportunities to study reasoning in realistic group conditions – outside of the lab.

In this presentation, Kris will give an overview of what was learned from The Justice Syndicate’s two week run in the Battersea Arts Centre, and the implications for the justice system as well as wider disagreements in society.

Biography

Kris De Meyer is a research fellow in the Department of Neuroimaging. His interests lie in the science of how people form opinions and become entrenched in their views.

He co-produced *Right Between Your Ears*, an award-winning documentary about how people can become convinced of something, even if it isn't true. He regularly speaks on BBC radio and TV about the neuroscience and psychology underpinning polarisation in society, including the recent BBC Radio 4 series *How to Disagree*.

With a little help from my friends: social relationships and their impact on mental health and wellbeing

Synopsis

Most mental health problems have their roots in childhood, and over 75 per cent of adults with a psychiatric disorder received a diagnosis before age 18.

The importance of prevention and early intervention for reducing the individual suffering and societal burden associated with mental health problems throughout the lifespan cannot be overemphasised. Research needs to identify malleable factors that influence the onset, persistence and desistence of symptoms and can be targeted by school, psychosocial and clinical interventions.

Social relationships are among key factors of this kind and can provide important support in times of trouble and turmoil; by the same token, the absence of social relationships, or problematic ones, can be the cause of distress across the life course and may exacerbate the risk of developing mental health problems or contribute to their persistence. This talk will propose social relationships as a potentially malleable target for changing and improving the course of mental health throughout the lifespan.

Biography

Louise completed her PhD in biomedical sciences at the University of Montreal and moved to the UK for a post-doctoral training at the MRC Social, Genetic & Developmental Psychiatry Centre. Her research focuses on the study of harmful behaviours such as violence and substance dependence, their developmental origins, their inter-connections with mental health, and their consequences for victims. She takes a developmental approach to investigate how the consequences of violence begin in childhood and persist to mid-life, by studying bullying victimisation and child maltreatment. Louise also studies the impact of social relationships including social support and loneliness on mental health.

In 2016 Louise was appointed the Economic and Social Research Council (ESRC) Mental Health Leadership Fellow; and was elected as Fellow of the Academy of Medical Sciences in 2018.



Dr Sameer Jauhar
Senior Research Fellow
Department of Psychological Medicine



Professor Corinne Houart
Professor of Developmental Neurobiology
Centre for Developmental Neurobiology

Sailing close to the wind of psychotic fire: a dopamine journey

Synopsis

The dopamine system has been central to our understanding of the aetiology and treatment of a number of neuropsychiatric illnesses, and the dopamine hypothesis of psychosis/schizophrenia remains one of the most enduring hypotheses within psychiatry.

This originally postulated that drugs of abuse causing psychotic symptoms exerted their effects through the neuromodulator dopamine, and that antipsychotics had their therapeutic effects by acting on the dopamine system. This has progressed through the advent of molecular imaging, where in-vivo we can examine the dopamine system in people with psychosis, meta-analyses suggesting the presynaptic dopamine system to have particular aetiological significance.

What is unclear from current literature is whether presynaptic dopamine is elevated across diagnostic boundaries (eg bipolar psychosis), whether it can explain why some people experience response to antipsychotic treatment, and others do not, and what effect antipsychotics have on this system.

Biography

Dr Jauhar graduated in Medicine from Glasgow University in 2002, having also completed a degree in Public Health and Epidemiology.

He moved to the IoPPN in 2012, to work with Professors Oliver Howes and Shitij Kapur on predominantly PET studies of the dopamine system, with the focus on psychosis and treatment response.

His research interests focus on understanding neurobiological causes of psychotic illness, with a focus on the affective psychoses, psychopharmacology and treatment of psychotic and affective illnesses.

He received a Royal College of Physicians, Edinburgh JMAS Sim Fellowship in 2018, enabling him to build on work examining the presynaptic dopamine system in affective psychoses. Clinically, he has worked as a consultant psychiatrist and responsible clinician in early intervention in psychosis since 2012, throughout South London and Maudsley NHS Foundation Trust.

Evolutionary risk taking in brain development

Synopsis

A forward genetic screen in zebrafish identified the splicing factor SFPQ as essential for normal motor development and suggested SFPQ dysfunction may be a possible cause of motor degeneration.

In this presentation, Corinne will present the latest findings of a specific splicing abnormality in absence of SFPQ, which may account for most of SFPQ motor pathology and opens a new avenue for therapy.

Biography

Corinne Houart is Professor of Developmental Neurobiology, MRC Centre for Neurodevelopmental Disorders and Deputy Head of the Centre for Developmental Neurobiology. She led the Centre from 2011 to 2014, is on the editorial board of leading developmental biology journals, board member of funding bodies, director of international summer courses (UK, USA) and recipient of the Suffrage Science Award.

Corinne started her own lab in London in 2001 at the IoPPN. Her team unveiled key mechanisms of fate specification shaping forebrain regionalisation and is currently identifying the evolutionary aspects of these early decisions. Part of the team focus on understanding signalling integration controlling telencephalic organisation in animal models and human 3D cell culture. Most recently, they developed an original approach to understand local RNA regulation driving neuronal maturation and neurodisorders.



Keynote speaker

Professor Ulrike Schmidt

Professor of Eating Disorders
Department of Psychological Medicine



Robin Bisson

Senior Press Officer
Press & Communications Department

The story of FREED: a service-level innovation, its implementation and emerging impacts

Synopsis

In Ulrike's talk, she will tell the story of FREED (first episode rapid early intervention for eating disorders), a multi-award winning evidence-based service model for emerging adults.

FREED was developed and tested within the South London and Maudsley eating disorders outpatient service, but has since been scaled further to four large eating disorder services in England, covering urban, suburban and rural areas. Via an NHS innovation accelerator award it is now being spread further across England with the aim of making FREED a national model of care for young people with eating disorders.

This summer, FREED will celebrate its fifth birthday since its inception. Lessons learnt from its (ongoing) development, implementation, evaluation, scaling, spread and journey to impact will be presented and discussed.

Biography

Ulrike Schmidt, MD PhD FRCPsych is Professor of Eating Disorders at the IoPPN and a consultant psychiatrist at the Eating Disorders Service at the South London and Maudsley NHS Foundation Trust. She is also an NIHR Senior Investigator.

A key focus of her research has been on experimental therapeutics. This work has included development of brief scalable psychological treatments and preventative interventions for eating disorders, delivered face to face or via the internet or mobile phones, and use of novel 'brain-directed treatments', such as non-invasive neuromodulation approaches.

She is the recipient of multiple awards, including the 2014 Hilde Bruch Award for Outstanding Achievements in Eating Disorders Research and Treatment and an NHS 70th Women's Leadership Award. She has led the development of the multi-award winning (BMJ Mental Health Team of the Year; Positive Practice Award) FREED early intervention programme for eating disorders.

Hitting the headlines – maximising impact through media exposure

Synopsis

With mental health increasingly a topic of public concern, it has never been more important for researchers to engage with journalists so the public are given evidence-based information through the media. The IoPPN Press Office not only helps researchers get media coverage but it supports them the whole way through.

Robin will speak about how to achieve high-profile, high-quality media coverage so that research findings reach far beyond the pages of academic journals. He works with radio, TV, print and online journalists at UK and international media outlets, generating news stories, securing interviews and working on documentaries and features. With hundreds of stories competing for the attention of editors and audiences, Robin will explain the how to attract media attention and achieve maximum impact. He will cover how best to work with journalists and why successful media work can lead not only to public attention but can open doors to opportunities including funding and new collaborations.

Biography

Robin is the Senior Press Officer at the IoPPN. He works with researchers on securing high-profile media coverage and highlighting the Institute as the premier academic centre for mental health research in Europe. Robin has degrees in mathematics and philosophy of science and previously worked at Science Media Centres in the UK, USA and Australia. He has written in the media on the importance of accuracy in science journalism and the risks to public support for science when reporting goes beyond the evidence.



Dr Marta Di Forti

Clinician Scientist MRC Research Fellow
and Consultant Psychiatrist
Social, Genetic & Developmental Psychiatry Centre



Dr Simone Fox

Consultant Clinical and Forensic Psychologist
Department of Child & Adolescent Psychiatry

Heavy cannabis use contributes to the high rates of psychotic disorders in London and Amsterdam

Synopsis

Despite the large body of evidence indicating cannabis use as a risk factor for psychotic disorders, sceptics continue to argue that changes in prevalence and patterns of cannabis use have not led to an increase in the incidence of psychosis.

In her presentation, Marta will present the first evidence from a European Collaboration study showing how frequent cannabis use, and especially the use of high potency types, contributes to explaining variations in incidence rates of psychotic disorders across Europe.

Biography

Marta di Forti is an MRC Clinical Scientist Fellow and Honorary Senior Lecturer at the Department of Social, Developmental & Genetic Research at the IoPPN, and Honorary Consultant Adult Psychiatrist, Lambeth Community team, South London and Maudsley NHS Foundation Trust. The clinical population Marta cares for comprises young individuals suffering their first episode of psychotic disorders. Two thirds of her patient group have used cannabis before their psychotic onset. Therefore, her current clinical position plays a crucial role in inspiring her ongoing research.

She is particularly interested in the role of cannabis use in psychosis and was the first to show that use of high potency types of cannabis, eg 'skunk', carries a higher risk of psychosis than use of traditional types. Now Marta studies the interaction between cannabis use and genes predisposing to schizophrenia, and how cannabis changes the epigenome.

The impact of qualitative research in multisystemic therapy for young people at risk of care or custody

Synopsis

Multisystemic Therapy (MST) is an evidence-based intervention for young people on the edge of care or custody who are demonstrating antisocial or aggressive behaviour. Whilst there is a wide range of research in MST both from the US and internationally, this research has mainly been at a quantitative level.

This talk will review the body of qualitative research undertaken by Dr Fox and her colleagues which has had a clear impact on the provision of MST services to families and young people in the UK and abroad. The MST Theory of Change was adapted following two publications, and the article on working cross-culturally within MST was in the top 20 downloaded articles in the Journal of Family Therapy. The feedback from the young people and their families has advanced training for clinicians, supervisors and experts across the world.

Biography

Dr Simone Fox is a consultant clinical and forensic psychologist, and multisystemic therapy (MST) consultant. She is employed by the National Implementation Service, South London and Maudsley NHS Foundation Trust and King's College London.

Prior to this, she was a MST supervisor and Deputy Clinical Director and a senior lecturer on the Doctorate in Clinical Psychology Programme, Royal Holloway, University of London. She has previously worked with adult mentally disordered offenders in medium secure units and prison, as well as with young offenders within a young offenders' institution. She has significant experience in undertaking psychological assessments for adults and young people in the criminal justice system. She is a co-editor of *Forensic Psychiatry* (part of the Oxford Specialist Handbooks in Psychiatry). She has published several book chapters and over 20 peer reviewed journal articles.



Dr Ioannis Bakolis
Lecturer in Biostatistics
Department of Biostatistics & Health Informatics



Dr Philippa Warren
King's Prize Research Fellow
Wolfson Centre for Age-Related Diseases

The urban environment and mental health

Synopsis

There is an emerging body of evidence that the urban environment can affect mental health. Living in the city can be a source of stress that results in increased risk of mental illness including depression, psychosis and generalised anxiety disorder.

While most research on the impact of city living on mental health has focused on aspects of the social urban environment, it has been suggested that the built urban environment may also play a significant role. The built urban environment refers to human-made aspects of the city such as urban fabric, level of noise, air pollution and access to green spaces. At present, however, we know very little about how different aspects of the built urban environment affect mental health. The talk aims to provide evidence on how different dimensions of the built and social environment are related to population mental health and present novel findings from recently conducted studies.

Biography

The focus of Ioannis' research is on how the social (eg neighbourhood deprivation) and built environment (eg green space, air pollution, noise) affects population mental health. Although not exclusively, much of his work is conducted within large population based surveys; birth cohorts and routinely collected information stemming from smartphone technologies.

Ioannis' research interests also extend to how to best implement and evaluate strategies for reducing stigma and discrimination in healthcare and community settings worldwide. He is also very interested in issues of causal inference with natural experiments and statistical methods for intensive longitudinal data as they relate to his work.

Drawing breath after spinal cord injury

Synopsis

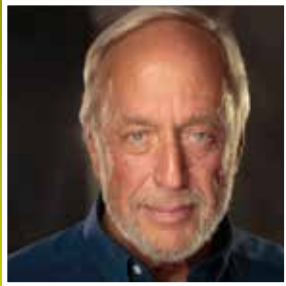
Respiratory failure is the leading cause of morbidity and mortality following acute and chronic spinal cord injury. However, there is currently no cure.

Philippa's work has uniquely recovered normal respiratory motor function 1.5 years after injury in 100 per cent of animals. Through a combined treatment which induced plasticity and serotonergic sprouting, paralysed rats rapidly regained complete diaphragm function, ventilatory capacity, muscle innervation, and partial forelimb activity following treatment. Importantly, these effects were fully maintained six months after treatment ended. Further, Philippa's work shows for the first time that this treatment works better at chronic rather than acute time points after injury.

Biography

Philippa received her PhD in Physiology, Development and Neuroscience from Cambridge University under Professors James Fawcett and Roger Keynes. During a Postdoctoral Fellowship at Case Western Reserve University (under the mentorship of Dr Warren Alilain and Professor Jerry Silver) she was trained in respiratory physiology, addressing the recovery of respiratory function after high cervical and chronic spinal injury.

Philippa developed these skills as a Fellow at the University of Leeds receiving additional training in muscle physiology and dynamics. She has recently established her own laboratory at IoPPN, where she continues to investigate the mechanisms of respiratory motor recovery and plasticity following acute and chronic spinal injury.



Professor Robert Plomin
 Professor of Behavioural Genetics
 Social, Genetic & Developmental Psychiatry Centre



Dr Penny Brown
 Wellcome Trust Clinical Research Fellow
 Department of Forensic & Neurodevelopmental Sciences

The DNA revolution

Synopsis

After 45 years of research, Robert Plomin has come to the view that inherited DNA differences are the major systematic force that makes us who we are as individuals – our mental health and illness, our personality and our cognitive abilities and disabilities. The environment is important but it works completely differently from the way we thought it worked.

The DNA revolution has made it possible to use DNA to predict our psychological problems and promise from birth. These advances in genetic research call for a radical rethink about what makes us who we are, with sweeping implications for our science and society. These are the themes of his book, *Blueprint: How DNA Makes Us Who We Are*.

Biography

Robert Plomin is MRC Research Professor in Behavioural Genetics in the SGDP department, which he helped launch in 1994 with Professor Sir Mike Rutter. The goal of the SGDP and Robert's research is to use genetic strategies to understand the developmental interplay between nature and nurture.

His research has used twin and adoption designs and now harvests the results of the DNA revolution. He has published more than 800 papers and is the senior author of the best-selling textbook in the field as well as a dozen other books. He has been given lifetime achievement awards from the American Psychological Association, the Association of Psychological Science, the Behavior Genetics Association and the Society for Research in Child Development, among others.

Fitness to plead on trial

Synopsis

Fitness to plead refers to a defendant's abilities to participate at trial. When someone is 'unfit' they are not tried but diverted from the criminal justice system, often to psychiatric care. It is widely held that the test for fitness is unfit for purpose. Legal reform has been proposed but is yet to take effect.

The IoPPN has developed a standardised instrument for assessing fitness to plead which has been tested on defendants at court. Penny's presentation looks at a mixed-methods study which validates the performance of the instrument as well as evaluating the suitability of existing and proposed legal frameworks for assessing fitness to plead. The impact is far-reaching. It aims to generate 'good practice' guidelines, improve the experience of vulnerable defendants, and provide empirically robust data for policy-makers.

Biography

Dr Penny Brown is a Wellcome Trust Clinical Research Fellow in the Department of Forensic & Neurodevelopmental Sciences. She is also a consultant forensic psychiatrist at the South London and Maudsley NHS Foundation Trust and is programme lead for the iBSc in Forensic Psychiatry, Criminal Behaviour & Law.

Her research focuses on the impact of mental health law on practice, in particular mental health capacity in forensic settings and mental health at court. She is currently leading a project exploring the concept, prevalence and assessment of unfitness to plead. She contributed to a Law Commission's consultation on 'Unfitness to Plead' and recently spent six months working at the Parliamentary Office of Science and Technology, preparing a research briefing for parliamentarians on the age of criminal responsibility.



Dr Jemeen Sreedharan
van Geest Post Doctoral Fellow
Department of Basic & Clinical Neuroscience



Dr Katharine Rimes
Reader in Clinical Psychology
Department of Psychology

TDP-43 gains function due to perturbed autoregulation in a Tardbp knock-in mouse model of ALS-FTD

Synopsis

Amyotrophic lateral sclerosis (ALS, also known as motor neuron disease, MND) is a devastating and incurable neurodegenerative condition that kills ~2,000 people each year in the UK. At the centre of almost all cases of ALS is a protein called TDP-43, which accumulates in diseased parts of the brain and spinal cord. TDP-43 controls the expression of genes in all cells of the body, and also regulates its own expression by a delicate balancing mechanism.

To understand the role of TDP-43 in disease we made a new mouse model that more accurately reflects human disease. This mouse demonstrates a fundamental disturbance in the delicate balancing mechanism controlling TDP-43. We found that this disturbance leads to a downstream change in critical genes that we think control brain development and degeneration. Interestingly, some of the mice appeared to be resistant to disease and had a slightly different profile of gene expression, which may confer resistance to disease. We believe these genes offer clues as to how to treat or even prevent disease in patients.

Biography

Dr Sreedharan developed an interest in neurodegeneration as a King's medical student. He conducted doctoral studies in the laboratory of Professor Christopher Shaw at the IoPPN, identifying TDP-43 mutations in patients with ALS. He completed neurology training and then obtained an MRC Intermediate Clinical Fellowship to model TDP-43 mutations in vivo. The first two years of this fellowship were spent at the University of Massachusetts Medical School, USA. He worked in the laboratory of Professor Marc Freeman to develop a novel method of screening for modifiers of TDP-43 toxicity using *Drosophila*. He also worked in the laboratory of Professor Robert Brown to develop a novel TDP-43 knock-in mouse.

In 2014 Dr Sreedharan returned to the UK to work with Professor Michael Coleman at the Babraham Institute in Cambridge, continuing his studies into TDP-43-mediated neurodegeneration. In 2017 Dr Sreedharan started his own laboratory at the Maurice Wohl Clinical Neuroscience Institute.

LGBT+ mental health research

Synopsis

Sexual and gender minority individuals (eg lesbian, gay, bisexual, transgender (LGBT+) people) have increased risk for mental health problems such as anxiety or depression. Minority stress theory proposes that this is due to the stress caused by LGBT+ related stigma, prejudice and discrimination. For example, these experiences can have a negative psychological impact such as lowering self-esteem, which in turn increases risk for mental health problems.

In this talk, research investigating such processes will be presented, as well as studies testing whether LGBT+ individuals benefit equally from psychological treatment in the NHS. A study testing a new intervention to improve self-esteem in young sexual minority adults will also be described.

Biography

Dr Katharine Rimes is a reader in clinical psychology and Programme Director for the Doctorate in Clinical Psychology. She is also an honorary consultant clinical psychologist at South London and Maudsley NHS Foundation Trust and an accredited cognitive behaviour therapist.

She undertook her BA in Experimental Psychology and PhD at the University of Oxford, then trained as a clinical psychologist at the IoPPN. She researches psychological processes involved in mental and physical illness and applies the findings to improve interventions. Her research interests include self-esteem and the impact of stigma. She leads the LGBT+ Mental Health research group at the IoPPN.



Dr Diana Cash

Postdoctoral Researcher and Preclinical Neuroimaging
Facility Manager
Department of Neuroimaging



Professor David Veale

Visiting Professor in Cognitive Behavioural Therapies
Department of Psychology

Stressed rats and empathic mice: translational neuroimaging at The BRAIN Centre

Synopsis

Diana will present examples of research taking place at The Biomarker Research and Imaging for Neuroscience (BRAIN) Centre in order to showcase the capability of translational neuroimaging to the wider IoPPN.

Given the prominent role of imaging in human brain research, she will emphasise how imaging can also be used to bridge the gap between the clinic and the laboratory. To this end, Diana will show how stress, aggression and callousness affect brain morphology in rodents, in the way similar to that in humans.

Biography

Originally trained in molecular biology and neuroscience, Diana’s research has been in elucidating the structure, function and disease of the central nervous system, by magnetic resonance and positron emission tomography imaging, and corroborative methods such as behaviour, EEG, histology and autoradiography. She has over 15 years’ experience of running collaborative projects in brain imaging and drug discovery. Now at the helm of The BRAIN Centre, she is keen to facilitate the development of imaging biomarkers of interest to neuroscientists from both academia and industry.

Triple chronotherapy for the rapid treatment of depression

Synopsis

Triple chronotherapy consists of resetting the circadian rhythm by total sleep deprivation. It is supervised on the first night with an occupational therapist, followed by a phase advance of sleep on day two to five, and daily bright light therapy thereafter. Early small controlled trials suggest that up to 50 per cent of depressed inpatients can recover within a few days.

In his presentation, David will present the first results from a feasibility study funded by King’s Health Partners for recruiting unipolar depressed outpatients in a randomised control trial of triple chronotherapy vs controlled intervention. The approach could have significant impact in health care provision with a relatively simple intervention. Questions remain as to who may benefit.

Biography

David Veale is a consultant psychiatrist and Visiting Professor in Cognitive Behavioural Therapies in the Department of Psychology at the IoPPN. He leads a national outpatient and residential service for people with severe treatment refractory OCD and Body Dysmorphic Disorder (BDD) at the Maudsley and Bethlem Royal Hospitals. He was a member of the group revising the diagnostic guidelines for ICD11 for obsessive compulsive and related disorders for the World Health Organisation.

David was a member of the group that wrote the NICE guidelines on OCD and BDD in 2006 and chaired the NICE Evidence Update on OCD in 2013. He is a fellow of the Royal College of Psychiatrists and the British Psychological Society and an honorary fellow and past president of the British Association of Behavioural and Cognitive Psychotherapies. He is a current trustee of the charities, OCD Action and the BDD Foundation.

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