# **BTS Monothematic Meeting 2024**

# Ageing and Transplantation



7th November 2024 | Fetal Medicine Research Institute, King's College Hospital, 16-20 Windsor Walk, Camberwell, SE5 8BB

The BTS will hold a one-day meeting to bring together researchers and clinicians to examine major issues around ageing and deceased donor kidney, and liver, transplantation. As the UK's population ages and accumulates multiple co-morbidities, transplant units are facing progressively difficult choices around the utilisation of organs from older donors, and how to optimise outcomes in elderly recipients. The meeting will examine the fundamental biological changes in ageing organs, novel interventions, and technological approaches to the older donor, with UK-based and international speakers. The final session will focus on 'pre-habilitation' and will update colleagues on UK and international evidence in this increasingly important field.

# **Programme**

Time	Detail
09:00	Registration and Refreshments
09:30	Welcome Address
Basic Sci	ence Session: Chaired by Professor Menna Clatworthy & Maria Kaisar
09:40	Transcriptomic biomarkers to assess biological age in transplantation
	M. Clatworthy, Cambridge
10:10	Kidney transplantation versus dialysis – effects on age-associated changes in DNA methylation?
	O. Neytchev, University of Glasgow
10.10	
10:40	Somatic mutations in liver ageing
	M. Hoare, University of Cambridge

11:10	Refreshment Break
11:30	How do old organs affect young recipients and can senolytics help?  S. Tullius, Brigham and Women's Hospital/Harvard Medical School (Virtual Presenter)
12:00	Lunch Break
'The olde	r deceased donor' Session: Chaired by Cat Boffa & Douglas Thorburn
13:00	UK Liver and Kidney Transplantation: Deceased donor and recipient age matching over time.  L. Mumford, NHSBT
13:20	Senolytic treatment preserves biliary regenerative capacity lost through cellular senescence during cold storage S. Ferreira, University of Edinburgh
13:40	Assessment and utilisation of the older deceased donor kidney  G. Pettigrew, Cambridge
14:00	Technological approaches to the older deceased donor: how will machine perfusion help us?  A. Weißenbacher, Medical University of Innsbruck
14:30	Refreshment Break
'The olde	r recipient' Session: Chaired by Chris Callaghan & Richard Baker
15:00	Prehabilitation in kidney transplantation S. Greenwood, King's College Hospital
15:20	Prehabilitation in liver transplantation  M. Armstrong, University of Birmingham
15:40	Elderly donor – elderly recipient: recipe for disaster?  M. McAdams-DeMarco, NYU Grossman School of Medicine/Langone Health (Virtual Presenter)

16:10	Panel Discussion: Prehab – where next? S. Greenwood, M. Armstrong, H. Maple, M. McAdams-DeMarco, B. Hogan
16:40	Summary and close of session.
17:00	Meeting closes

# **Speakers**

# M. Armstrong

Dr. Matthew Armstrong is Consultant and Honorary Reader in Liver Transplantation since 2017 at Birminghams Liver Unit. Clinical lead for Liver transplantation and MASLD. 150+ publications in the field with main research interests including obesity/weight loss, MASLD, transplantation, (p)rehabilitation and frailty. Chief Investigator of the NIHR-EME funded EXALT trial, which is an 269 patient RCT in home-based exercise and motivation program.

### R. Baker

Richard is a nephrologist in Leeds with a specialist interest in transplantation. He also contributes to the living liver donation and hand transplantation programmes. He has a long interest in all aspects of transplantation since his PhD studies in London. He has previously been treasurer and remains a staunch advocate of the BTS.

# M. Clatworthy

Menna Clatworthy is the Professor of Translational Immunology at the University of Cambridge Department of Medicine. She also works clinically as an Honorary Consultant Nephrologist and holds an Associate Faculty position in Cellular Genetics at the Wellcome Sanger Institute. Her research is focused on understanding how tissue-environments shape resident immune cell function, and how tissue immune networks interact across organs. She is also an active participant in the Human Cell Atlas Project (https://www.humancellatlas.org), utilizing single cell technologies to better understand the cellular landscape of the human organs.

# S. Greenwood

Prof. Sharlene Greenwood is a Consultant Physiotherapist at King's College Hospital, a Professor in Exercise and Lifestyle Therapy at King's College

London, and the co-founder and Chief Medical Officer for Kidney Beam. Sharlene has worked with people living with kidney disease for over 20 years, mostly designing and evaluating different ways to motivate people to be more active. Most recently, Sharlene led on the development of Kidney Beam www.beamfeelgood.com, a novel digital platform that was rapidly developed to help people living with kidney disease manage their physical and emotional wellbeing during the COVID pandemic and beyond.

#### M. Hoare

Dr. Matt Hoare is Assistant Professor of Hepatology at the University of Cambridge, group leader at the Early Cancer Institute and hepatologist at Addenbrooke's Hospital in Cambridge. He leads the East of England service for hepatocellular carcinoma (HCC) and contributes to numerous observational and interventional clinical trials in HCC.

# B. Hogan

Brian Hogan joined UCL and RFL as the Lead Clinician in Liver Critical Care and a Consultant in Critical Care Medicine and Hepatology in 2022, specialising in critical care for patients with liver failure and those needing liver transplantation. He is experienced in all aspects of liver disease.

Before returning to UCL, from 2017-2022 he was a Consultant in Liver Critical Care and Hepatology at King's College Hospital, London.

#### M. McAdams-DeMarco

Mara McAdams-DeMarco's research focuses on the epidemiology of aging with a specific interest in patients with end-stage kidney disease undergoing transplantation. She seeks to better understand how novel metrics of aging, like frailty and cognitive function, can improve risk prediction in kidney transplant recipients and patients undergoing hemodialysis. Mara is also currently conducting a 2-by-2 factorial RCT to identify interventions to preserve cognitive function among patients initiating hemodialysis. she studies the impact of medications on age-related outcomes among patients with end-stage kidney disease using national registry data linked to Medicare claims. Finally, Mara has a new project to better understand the intersection of health equity and cognitive aging in ESKD and KT. Mara is also the co-director of the Kidney Disease and Aging Research Collaborative.

# H. Maple

Hannah Maple has been a consultant at Guy's and St Thomas' NHS Foundation Trust since 2022.

She was the first clinical lecturer in transplant and general surgery in London. She worked on a National Institute for Health and Care Research funded study looking at barriers and outcomes in unspecified (altruistic) kidney donation. Her research interests include the psychosocial aspects of living donation and transplantation, altruistic kidney donation, frailty and pre-habilitation.

### K. V. Menon

Krish Menon specialises in liver transplants and has a particular expertise in laparoscopic (keyhole) surgery for the liver, gall bladder and pancreas.

#### L. Mumford

Lisa Mumford is the Head of Organ and Tissue Donation and Transplantation Studies within the NHSBT Statistics and Clinical Research Department. She joined NHSBT in 2004 and has primarily specialised in the areas of pancreas and kidney transplantation. Lisa is on the NHSBT ODT Senior Management Team and a number of NHSBT's Advisory Groups.

# O. Neytchev

Ognian is a researcher in the Shiels lab at the University of Glasgow with a focus on understanding the mechanisms that drive biological ageing in humans, developing and validating biomarkers of ageing, and identifying interventions that can slow or reverse the ageing process. With a PhD in Geroscience from the University of Glasgow and dual degrees in Biology (University of Milan) and Economics (Bocconi University, Milan), Ognian combines expertise in wet lab biology, data analysis, and bioinformatics.

# **G. Pettigrew**

Gavin is Professor of clinical and experimental transplantation at Cambridge University. His research interests focus on the basic science of transplant rejection, and on strategies to promote and expand the UK donor pool. He is Chief Investigator of the Pithia trial that evaluates how the introduction of a National Histopathology Service impacts upon the number, and outcomes, of deceased kidney transplants performed in the UK.

## S. Tullius

Stefan G. Tullius, MD, PhD is Professor of Surgery at Harvard Medical School; the Joseph E. Murray, MD Distinguished Chair in Transplant Surgery, Chief of Transplant Surgery, and Director of the Transplant Surgery Research Laboratory at Brigham & Women's Hospital, Boston. He has served as Vice President of The Transplantation Society (TTS), Sr. Treasurer for TTS, and a Vice President of the Int'l Society of Uterus Transplantation. He has been an Executive Editor and is the incoming Editor-in-Chief of Transplantation, an Associate Editor of Transplant International, and has served as Associate Editor of the American Journal of Transplantation. In addition, he leads a productive NIH-funded research laboratory and lists > 300 PubMed scientific manuscripts as well as several book chapters. He is an international speaker at scientific meetings and workshops; serves and has served on the Board of societies such as ESOT, TTS, UNOS, and the National Kidney Registry.

# A. Weißenbacher

Academic consultant surgeon (transplant and general surgery), with a DPhil in Oxford on Normothermic Kidney Presevation. Annemarie has an interest in ex-situ organ preservation of livers and kidney (besides clinical abdominal organ transplantation liver, pancreas, and kidney). She also has a special interest in Global Healthcare and is currently undergoing a Masters on the subject with the University of Oxford.

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