NIHR | Sheffield Biomedical Research Centre

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StarMS

The 3rd International Symposium on Stem Cell Treatment in Multiple Sclerosis

Friday 3rd April, 2020

Humanities Research Institute, Sheffield, S3 7QY

Programme

09:30 Arrival and registration with refreshments

09:45 **Welcome and Introduction**
Professor Dame Pamela Shaw I Director of SITraN, NIHR Sheffield Biomedical Research Centre and the Neuroscience Research Institute, University of Sheffield

Morning Session: European HSCT-MS Trials

Chair: Professor Basil Sharrack I Sheffield Teaching Hospitals NHS FT

10:00 **UPDATE: Hematopoietic Stem Cell Therapy for Patients with Inflammatory Multiple Sclerosis Failing Alternate Approved Therapy: A Randomized Study (MIST)**
Professor Richard Burt I Northwestern University, Chicago

10:20 **LAUNCH: Autologous Stem Cell Transplantation versus Alemtuzumab or Ocrelizumab in Relapsing Remitting Multiple Sclerosis (StarMS)**
Professor John Snowden I Sheffield Teaching Hospitals NHS FT

10:35 **RCT Comparing Autologous Hematopoietic Stem Cell Transplantation Versus Alemtuzumab in MS (RAM-MS)**
Professor Lars Bø I Haukeland University Hospital, Bergen, Norway

10:50 **No Evidence of Disease Activity in Autologous Hematopoietic Stem Cell Transplantation vs. Best Available Therapy in Aggressive Forms of Multiple Sclerosis (NET-MS)**
Professor Matilde Inglese I University of Genoa, Italy

11:05 **Best Available Therapy vs. Autologous Hematopoietic Stem Cell Transplant for Multiple Sclerosis (BEAT-MS)**
Professor Paolo Muraro I Imperial College London

11:20 **A rater-blinded multicentre randomised controlled trial to Compare Alemtuzumab and Autologous Hematopoietic Stem Cell Transplantation (aHSCT) in High Inflammatory Multiple Sclerosis (COAST)**
Speaker TBC I University Medical Centre Hamburg-Eppendorf

11:35 DISCUSSION: Harmonising Long Term - Data Collection
Professor Basil Sharrack I Sheffield Teaching Hospitals NHS FT

11:45 Networking session and refreshments

12:00 Rehabilitation and the patient perspective
Chair TBC

12:05 Rehabilitation following aHSCT
Fiona Roberts I Hobbs Rehabilitation

12:25 aHSCT – The Patient Perspective
Colette Beecher I Sheffield Hallam University
Alison Coates I Auto-Immune and MS (AIMS) Charity

12:45 Discussion and questions

13:00 Lunch

Afternoon session: Regenerative Medicine and MS
Chair: Professor Peter Andrews I University of Sheffield

14:00 The potential of bone-marrow derived MS cell therapies other than aHSCT
Dr Claire Rice I University of Bristol

14:30 Restoring the regenerative capacity of aged OPCs to enhance remyelination
Dr Bjorn Neumann I University of Cambridge

15:00 Induced pluripotent stem cells for tissue regeneration
Professor Richard Burt I Northwestern University, Chicago

15:45 Refreshment Break

16:00 Shaping regional identity during pluripotent stem cell differentiation: implications for regenerative medicine
Dr Anestis Tsakiridis I University of Sheffield

16:25 Regulatory Perspective – MHRA
Dr Louise Bisset I MHRA

16:50 The UK Stem Cell Bank: Supporting scientific research and clinical development of stem cell therapies
Dr Elsa Abranches I UK Stem Cell Bank

17:15 Questions and close

The Queen's Anniversary Prizes
For Higher and Further Education
2019

NHS Parliamentary Awards

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The 3rd International Symposium on HSCT in MS

Speaker Biographies

Professor Dame Pam Shaw

Sheffield Institute for Translational Neurosciences

Professor Shaw graduated in Medicine with 1st Class Honours from the University of Newcastle in 1979. In 1988 she was awarded an MD with commendation for her work on the neurological complications of coronary bypass surgery. After an intermediate fellowship award from the Wellcome Trust, she was awarded a Wellcome Senior Fellowship in Clinical Science which she held from 1991 -2000. Professor Shaw is the Director of both the Sheffield Institute for Translational Neurosciences, and the Sheffield NIHR Biomedical Research Centre. She is a Professor of Neurology at the University of Sheffield and Consultant Neurologist at the Royal Hallamshire Hospital. Professor Shaw has devoted her career as a clinician scientist to translating basic research findings to the clinic in the field of neurodegeneration, especially ALS/MND. She is a world leading MND researcher

Professor Basil Sharrack

Sheffield Teaching Hospitals NHS FT

Professor Basil Sharrack is Consultant Neurologist and Honorary Professor of Clinical Neurology at the Royal Hallamshire Hospital, Sheffield. His main areas of interest are neuro-inflammation and degeneration in MS, therapeutic clinical trials in MS, autologous haematopoietic stem cell transplantation (AHSCT) and cognitive rehabilitation for people with MS, and idiopathic intracranial hypertension. Basil has authored over 90 peer reviewed original articles and received over £8 million in grants and income from commercial clinical trials. He plays a leading role in the design and conduct of MS clinical trials in the UK, which include the first gene therapy trial at Sheffield Teaching Hospitals NHS Foundation Trust and the first phase III AHSCT treatment in patients with MS.

Professor John Snowden

Sheffield Teaching Hospitals NHS FT

Professor John Snowdon graduated from the University of Leeds in 1989 and trained in Internal Medicine and Haematology in the UK, New Zealand and Australia. In 2002, he was appointed as Consultant Haematologist & Director of Blood and Marrow Transplantation (BMT) in the Sheffield Teaching Hospitals NHS Foundation Trust.. He is the Chair of the EBMT Autoimmune Disease Working Party and Chair of the JACIE organisation, which oversees the accreditation of BMT programmes throughout Europe. He is also the current Secretary of the British Society for BMT (BSBMT). John is lead applicant and Co-CI on the NIHR EME funded STAR-MS phase III randomised controlled trial of autologous HSCT versus alemtuzumab in relapsing remitting MS, and he is also Lead Haematologist in the NIHR EME funded ASTIC-life trial of autologous HSCT versus standard of care in Crohn's disease.

Professor Lars Bø

Haukeland University Hospital, Bergen

Lars Bø is Professor of Neurology at the Department of Clinical Medicine, University of Bergen, staff neurologist and Director of the Norwegian Competence Centre for MS at the Department of Neurology, Haukeland University Hospital, in Bergen, Norway. His clinical interest is MS and demyelinating diseases, with a particular emphasis on MS treatment studies. He is principal investigator of RAM-MS, an ongoing North European randomized trial of autologous hematopoietic stem cell transplantation vs. alemtuzumab, cladribine, ocrelizumab for relapsing remitting MS . Lars Bø's research has focused on neurodegeneration in MS, including studies on the immunopathology of axonal loss, grey matter demyelination.

Dr Matilde Inglese

University of Genoa, Italy

Matilde Inglese, MD PhD is an internationally recognized expert in the field of neuroimaging in demyelinating disorders. She is an Associate Professor of Neurology, Radiology and Neuroscience, at the Icahn School of Medicine at Mount Sinai in New York. She trained as a neurologist in Genoa, Italy, where she completed her fellowship in multiple sclerosis. In 2011, after her tenure as an Associate Professor of Radiology, Neurology and Biomedical Imaging at New York University, she moved to Mount Sinai, where she directs the Research Imaging Program in the department of Neurology. Her Research has a clinical and translational focus by investigating novel clinical outcomes of MS-related neurological deficits and in vivo mechanisms of brain injury and repair by means of neuroimaging techniques.

Professor Paolo Muraro

Imperial College London

Paolo Muraro is one of the senior academics in the Division of Brain Sciences, Department of Medicine where he serves as Deputy Head of Division (Education and Training) and directs the Clinical Neuroimmunology Group within the Centre for Neuroinflammation and Neurodegeneration. He is also an Honorary Consultant Neurologist at Imperial College Healthcare NHS Trust. A medical graduate from University of Rome "La Sapienza", Dr Muraro trained in Clinical Neurology and Neuroimmunology. His research programme is aimed at understanding and developing effective therapies for inflammatory neurological diseases, particularly multiple sclerosis (MS). His scientific contributions include studies of T cell repertoires in health and autoimmune disorders, and the elucidation of the mechanisms of action of immuno-modulatory treatments and haematopoietic stem cell transplantation (HSCT) in MS.

Speaker TBC

University Medical Centre Hamburg-Eppendorf

Fiona Roberts

Hobbs Rehabilitation

Colette Beecher

Sheffield Hallam University

Colette Qualified as an Occupational Therapist in 1990 and is a Specialist Occupational Therapist in Neurology. Her previous work history has involved working in Neuro rehabilitation and community rehabilitation including intermediate care, over a 16 years period. Colette has a specialist interest in cognitive rehabilitation and brain injury. Colette then went on to complete an MSc in Vocational Rehabilitation in 2014 and joined the teaching staff within the Occupational Therapy team at Sheffield Hallam University in 2006. She was also awarded an Inspirational teaching Award in 2014.

Alison Coates

Auto-Immune and MS (AIMS) Charity

Alison and James Coates set up the AIMS charity to help people after James had received Haematopoietic Stem Cell Transplant (HSCT) for his Multiple Sclerosis. AIMS is the first charity set up in the UK with a focus on helping people who suffer from Auto-Immune Diseases, with a focus on Multiple Sclerosis (MS) & Haematopoietic Stem cell

Transplant (HSCT). The charity has been founded with the aim of signposting, advising and supporting people who wish to find out more and pursue HSCT as a treatment.

Professor Peter Andrews

The University of Sheffield

Prof. Andrews is Co-Director of the Centre for Stem Cell Biology at the University of Sheffield and leader of its Stem Cells and Cancer research group. The appearance of genetically abnormal cells arising from pluripotent stem cells in culture offers a unique model to study the initiation and progression of cancer cells. These models will allow the identification of critical genes which are responsible for the cancer-like properties of cells and may lead to novel strategies and therapies for treatment.

Dr Claire Rice

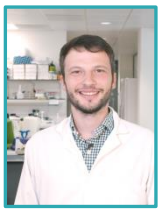
University of Bristol

Dr Claire Rice is a Consultant Senior Lecturer in Multiple Sclerosis Neurology at the Institute of Clinical Neurosciences in Bristol. She was awarded a BA (Hons) in Neuroscience from Cambridge University in 1996 and completed her undergraduate medical training in Cambridge, qualifying in 1998. Dr Rice works with the MS team at the Bristol and Avon MS Unit (BrAMS), Southmead Hospital and runs a specialist clinic in neuroinflammatory disease as well as participating in the general neurology service at Southmead Hospital. The aim of her on-going laboratory-based research is to improve repair in MS and she has been actively involved, together with Professor Scolding, in setting up clinical trials of bone marrow-derived cell therapy in progressive MS.

Dr Richard Burt

Northwestern University, Chicago

Dr Richard Burt is the Chief of Immunotherapy and autoimmune diseases in the Department of Medicine and Professor of Medicine in the Division of Immunotherapy and Autoimmune Diseases (DIAD) at the Northwestern University Feinburg School of Medicine, Chicago. DIAD is the only centre in the world devoted to a unique area of treatment and research utilising stem cell transplantation in clinical trials for autoimmune diseases and vascular diseases. DIAD pioneered and performed America's first hematopoietic stem cell transplants.



Dr Björn Neumann

University of Cambridge

Björn Neumann is a postdoc working with Professor Robin Franklin in the Wellcome-MRC Cambridge Stem Cell Institute. He is interested in the ability of endogenous adult stem cells (stem cells already in our bodies) to regenerate injured or diseased organs throughout life. His research focuses on the detrimental effects of ageing on adult brain stem cells and their consequences for regeneration in chronic diseases, such as Multiple Sclerosis. Apart from investigating the molecular changes that contribute to the age-related functional decline of stem cells, he tries to identify interventions to rejuvenate their own repair mechanisms of the body.

Dr Anestis Tsakiridis

University of Sheffield

Anestis Tsakiridis did his PhD in Lesley Forrester's laboratory at the University of Edinburgh focusing on the development of novel gene trap vectors for random inactivation of lineage-specific genes in mouse embryonic stem cells (mESCs). He then joined Josh Brickman's group at the Institute for Stem Cell Research in Edinburgh where he worked on the development of a novel microsphere-based approach for high-throughput delivery of macromolecules into ESCs. In 2009 he switched his focus on the study of early embryonic development by joining the group of Val Wilson (MRC Centre for Regenerative Medicine, Edinburgh). In the summer of 2015 he was awarded a Vice-Chancellor's Fellowship from the University of Sheffield to start his own research group at the Centre for Stem Cell Biology (CSBC), Biomedical Sciences Department (BMS) in January 2016.

Dr Louise Bisset

Senior Biologicals Quality Assessor, MHRA

Dr Elsa Abranches

UK Stem Cell Bank

Dr. Elsa Abranches joined the UK Stem Cell Bank team in December 2015 as a Senior Stem Cell Biologist. In January 2019, Dr. Elsa was appointed Group Leader of the Section of Stem Cell Biology and Director of the UK Stem Cell Bank. Her primary focus is developing and delivering a programme of research and development that assures the quality of both research and clinical grade human pluripotent stem cell lines. Her areas of interest include understanding how gene regulatory networks are assembled, how they function to sustain proper cell fate decisions and how to use this information to achieve efficient, reproducible & cost-effective expansion of human pluripotent stem cell lines. She graduated in 2001 from the Technical University of Lisbon in Chemical Engineering, and was awarded her PhD in the field of Stem Cell Biotechnology where she worked with mouse embryonic stem cells to optimize stem cell growth in bioreactors. She then worked as a post-doctoral researcher initially in the field of neural differentiation and subsequently on self-renewal and pluripotency regulation of embryonic stem cells.