UNIVERSITY OF OXFORD

8TH ANNUAL UK & IRELAND EARLY CAREER BBB SYMPOSIUM

SCIENTIFIC AGENDA

08:00-09:00	Registration, poster and exhibition set-up & welcome coffee/tea
09:00-09:10	**Prof. Alastair Buchan** Meeting welcome address
09:10-09:40	**Keynote speaker Dr David Begley, King's College London** **The BBB and Lysosomal Storage Diseases**
09:40-10:55 **Session 1**	09:40-09:55 **Dr Sarah Peeters (University of Oxford)** *In vivo* comparison of two types of microbubbles for ultrasound induced blood-brain barrier breakdown 09:55-10:10 **Corinne Morfill (Imperial College London)** L-DOPA functionalised, multi-branched gold nanoparticles as brain-targeted nano-vehicles 10:10-10:25 **Sophie Morse (Imperial College London)** Minutes-long blood-brain barrier opening with Rapid Short-Pulse (RaSP) ultrasound and microbubbles *in vivo* 10:25-10:40 **Nayab Fatima (The Open University)** The Gold nanocarriers for delivery of oligonucleotides to the CNS 10:40-10:55 **Dr Paul Holloway (University of Oxford)** Meniscal pinning of a spatially defined hydrogel for passively perfused 3D cell culture: Developing an ischemic neurovascular unit on chip
10:55-11:20	Tea & coffee break/ Exhibition
11:20-12:55 **Session 2**	11:20-11:35 **Dr Tereza Andreou (University of Leeds)** Establishing a lentiviral haematopoietic stem cell gene therapy for brain tumours using myeloid cell-specific gene promoters 11:35-11:40 **Dr Camilla Cerutti (University of Bristol)** Cdc42-targets IQGAP1 and NWASP regulate cancer cell: brain endothelial cell interaction via B1 integrin 11:40-11:45 **Dr Shanyi Zhang (University of Cardiff)** Junctional adhesion molecular C (JAM-C) bridles breast cancer cell adhesion to and transmigration across hCMEC/D3 cells mediate by silencing transcriptional regulation of integrin beta 3 via C-myc 11:45-12:00 **Dr Mario Munoz Pinto (University of Oxford)** Development of new TNFR1-selective agonist TNF mutants to induce BBB permeabilisation at sites of brain metastases 12:00-12:05 **Dr Joanna Pyczek (University of Exeter)** *In vitro* model of the blood-brain barrier for studying brain tumour metastasis 12:05-12:20 **Dr Chris Greene (Trinity College Dublin)** Dynamic tight junction remodelling in epilepsy; the role of claudin-5 12:20-12:35 **Anjana Ajikumar (University of Sheffield)** Neutrophil-derived microvesicle- induced blood brain barrier dysfunction in the ageing brain 12:35-12:40 **Chantelle Bowers (University College London)** The neuroprotective potential of Simvastatin 12:40-12:55 **David Roig-Carles (The Open University)** Brain endothelial-derived exosomes induce blood-brain barrier dysfunction during neuroinflammation
12:55-13:10	**James Howes** The Revolve Microscope – Change the Way You View Science ECHO
13:10-14:00	Lunch break

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13:30-14:00	Poster session/ Exhibition
14:00-14:30	**Keynote speaker Prof. Elga de Vries, VU University Medical Center (VUmc) Amsterdam, President of IBBS (International Brain Barriers Society)** **The neurovascular unit in health and disease**
14:30-15:30 **Session 3**	14:30-14:45 **Ester Pascual-Baixauli (The Open University)** Effect of high fat diet on cerebrospinal fluid secretion in the rat 14:45-14:50 **Madeeha H Sheikh (Queen Mary University of London)** Impact of metabolic overload on the structural integrity of the blood-brain-barrier 14:50-15:05 **Eduardo Frias-Anaya (The Open University)** Molecular and ultrastructural characterization of the ageing blood-brain barrier in female mice 15:05-15:10 **Mary Goodwin (University of Cambridge)** Developing an hiPSC-derived 3D *in vitro* model of the blood-brain barrier to study COL4A1/2 cerebral small vessel disease 15:10-15:25 **Dr Zubida Al-Majdoub (University of Manchester)** Proteomic Quantification of Human Blood-Brain Barrier Drug Transporters and Solute Carriers in Healthy Individuals and Dementia Patients 15:25-15:30 **Conor Delaney (Trinity College Dublin)** A role for Colony Stimulating Factor 1 Receptor Signalling in the generation of cerebrovascular and BBB pathology
15:30-16:00	**Dr Verena Heise Open and Reproducible Science for early career researchers**
16:00-16:30	Tea & coffee break/ Exhibition
16:30-17:00	**Keynote speaker Dr. Eduard Urich, Roche Pharmaceutical Research and Early Development, Roche Innovation Center Basel, Switzerland** **Brain Shuttle Module Delivers Biologics Efficiently to the Brain**
17:00-18:30 **Session 4**	17:00-17:20 **Dr Reiner Haseloff (Leibniz Research Institute of Molecular Pharmacology)** Crossing cellular barriers by a tricellulin-derived peptide 17:20-17:25 **Nicole Stone (University of Nottingham)** Modelling the Blood-Brain Barrier *in vitro* using four primary human cells types 17:25-17:40 **Shereen Nizari (The Open University)** How does loss of cholinergic innervation affect the structure and function of the neurovascular unit? 17:40-17:45 **Jui-Hsien Chang (University College London)** Both Paracellular and Transcellular Leakage Pathways Are Operational at the Blood-Neural Barriers 17:45-18:00 **Hao Wang (King's College London)** Modifying Pentamidine Blood-Brain Barrier transport through Ion-Pair Formation 18:00-18:15 **Dr Zahraa Al-Ahmady (Nottingham Trent University)** Biphasic Blood Brain Barrier Permeability in a Mouse Model of Intracerebral Haemorrhage Offers a Novel Route for the Transport of Advanced Therapeutics into the Lesioned Brain 18:15-18:30 **Jay Roodselaar (University of Oxford)** A new model for progressive multiple sclerosis - treating B cell rich meningeal tertiary lymphoid structures with anti-CD20
18:30-18:40	**Prof. Daniel Anthony, Prof. Nacho Romero** Closing remarks
18:40-20:00	Drinks reception/ Poster session