GUEST SPEAKERS

2016 GLOBAL DOCTORAL PARTNERSHIPS ANNUAL WORKSHOP
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Professor Dame Frances Ashcroft

Professor Dame Frances Ashcroft is Professor of Physiology at the University of Oxford, a Fellow of Trinity College Oxford, and a Fellow of the Royal Society of London. Her research focuses on how changes in blood glucose levels regulate insulin secretion from the pancreatic beta-cells and how this process is impaired in diabetes. She discovered that the ATP-sensitive potassium (K\textsubscript{ATP}) channel serves as the molecular link between glucose elevation and insulin secretion. Mutations in K\textsubscript{ATP} channel genes cause a rare inherited form of diabetes (neonatal diabetes), and her work has enabled patients with this disorder to switch from insulin injections to drug therapy. Among the many awards Ashcroft has received for her research are the Croonian Lecture of the Royal Society and the L’Oreal/UNESCO Woman in Science Award (European Laureate 2012). In 2015 she was made Dame Commander of the Order of the British Empire. Frances Ashcroft has made significant contributions to public engagement in science. Her book *Life at the Extremes - the science of survival* (HarperCollins, 2000) explains what happens to the human body at environmental extremes. It was critically acclaimed, became a bestseller (selling >100,000 copies worldwide), and was translated into 12 languages. Her latest book, *The Spark of Life - electricity in the human body*, was published by Penguin (and Norton, USA) in 2012, was well reviewed and won the Lewis Thomas Prize for Science Writing (2013).
Dr Steven Chatfield

Dr Chatfield has worked for more than 35 years in the Biopharmaceutical Industry and the public sector in the field of healthcare. He has worked at CSO, CEO, CBO and Executive management and Board level in several leading UK and International Biopharmaceutical Companies for more than 20 years.

Dr Chatfield served as Chief Scientific Officer and Executive Vice President of Strategic Investments for Emergent BioSolutions and President and CEO for the UK operation. He previously served on the Board and Executive teams of Microscience Ltd, (CSO and Chief Development Officer) Medeva PLC and the Health Protection Agency where he was Director of the Centre for Emergency Preparedness and Response at Porton Down.

Dr Chatfield began his career working in Vaccine research and development at the Wellcome Foundation. He is recognised internationally as an opinion leader in the field of Biotechnology. His research efforts focused on developing novel vaccines and immunotherapies. He has published over a 100 papers in this field and is named as an inventor on 20 patents.

Currently, Dr Chatfield serves on the Board of Directors of the International Biomedical Research Alliance, the Scientific Advisory Board for the Jenner Institute at the University of Oxford and Prokarium (a UK Vaccine Company working on orally delivered vaccines). Dr Chatfield is now working as a consultant and is also the Non-Executive Chairman of Prokarium Ltd.
Professor Constantin-C. Coussios

Professor Constantin Coussios received his BA, MEng and PhD in Engineering from the University of Cambridge and was elected to the first statutory chair in Biomedical Engineering at the University of Oxford in 2011, with special responsibility for drug delivery and therapeutic devices. He founded and heads the Biomedical Ultrasonics, Biotherapy and Biopharmaceuticals Laboratory (BUBBL), a research group of 4 faculty and some 45 researchers working on a wide array of therapeutic applications.

He also recently launched and serves as the Director of the £11m Oxford Centre for Drug Delivery Devices (OxCD3) established in 2014 and supported by a national programme grant from the UK’s Engineering and Physical Sciences Research Council in collaboration with the pharmaceutical and medical device industry to improve drug delivery to tumours. Prof Coussios received the UK’s Institute of Acoustics’ Young Person’s Award for Innovation in Acoustical Engineering in 2007, was elected as Secretary-General of the International Society for Therapeutic Ultrasound between 2006–2010 and was honoured with the Society’s Fred Lizzi award in 2012.

He was elected as the youngest ever Fellow of the Acoustical Society of America in 2009, and received the Society’s Bruce Lindsay award in 2012. In 2008, he was one of two academic founders of the Oxford University spin-out OrganOx Ltd., which has developed a novel normothermic perfusion device for improved liver and kidney preservation prior to transplantation through to first-in-man trials and first sales. In 2014, he co-founded OxSonics Ltd, which is developing a new generation of ultrasound-based medical devices for drug delivery and minimally invasive surgery.
Ted took over as Chief Executive Officer of Prokarium from Carl-Johan Spak in Spring 2014 after having managed Business Development at Prokarium since 2011 as Development Director. He graduated with a PhD in Biotechnology from the University of Guelph, Canada, and has 9 years of experience in immunology/biotech R&D. He has worked in the clinic at one of Europe’s largest hospitals, Sahlgrenska University Hospital, in Gothenburg, Sweden and has 3 years’ experience in strategy consulting, working with policy makers and venture capitalists to develop strategies for SME development.
Herbert M. Geller, Ph.D.

Herbert M. Geller, Ph.D., is the Director of the Office of Education and Chief of the Developmental Neurobiology Section of the NHLBI Division of Intramural Research (DIR). In this role, he is responsible for the oversight of the training, mentoring and career guidance activities of the NHLBI DIR and serves as a policy advisor on training issues to the Scientific Director. The NHLBI DIR training program is one of the largest within the NIH supporting more than 300 trainees, including summer students, postbaccalaureate trainees, graduate students and postdoctoral fellows. Dr. Geller came to NHLBI in 2001 to head the Office of Education.

Dr. Geller’s laboratory focuses on understanding the role of the extracellular matrix in controlling neuronal migration, pathfinding and growth, both during neural development and in order to stimulate regeneration after injury. His laboratory has focused on the role of proteoglycan glycosaminoglycan chains in the extracellular matrix on signaling to neurons. He was the first to identify a novel sulfation motif within chondroitin sulfate proteoglycans and has developed a potential therapy for spinal cord injury using a drug that specifically targets this motif. Most recently, his group participated in the identification of novel neuronal receptors for proteoglycans.

After obtaining a bachelor’s degree in Electrical Engineering from the City College of New York, he obtained his Ph.D. in Biomedical Engineering from Case Western Reserve in Cleveland, Ohio. He then took a Postdoctoral training in Physiology at the University of Rochester, and then moved to Rutgers University – Robert Wood Johnson Medical School in New Jersey, where he became a Professor of Pharmacology and Neurology. He also gained international experience as a Fogarty International Fellow at University College, London. He was head of the Graduate Program in Pharmacology at Rutgers University/UMDNJ and headed an NIH Training Program in Molecular Pharmacology. He has trained over 30 graduate students and postdoctoral fellows. Before coming to NIH, his research was supported by NIH, NSF and private Foundations. He has also served on many different study sections for the National Institutes of Health, National Science Foundation and the Veterans Administration.

He currently sits on the Editorial Boards of the International Journal of Developmental Neuroscience and the Journal of Neuroscience Methods. He is a member of the Society for Neuroscience and was elected a Fellow of the AAAS in 2013.
Ms Anita Gola

Anita graduated from the University of Southampton with a BSc in Biochemistry, and subsequently pursued a Master in Integrated Immunology at the University of Oxford. During her MSc, she became interested in understanding memory CD8 T-cell functions and long term survival, a field she would later return to for her DPhil. Having dabbled in leukocyte migration and recruitment in the context of acute inflammation at Ludwig Maximilian University of Munich in Prof. Walzog’s lab, she returned to the University of Oxford for her DPhil. As a Wellcome Trust-NIH scholar, she will be working with Dr. Ronald Germain to understand liver tissue-resident CD8 T-cells migration and maintenance using quantitative multi-parameter confocal imaging and intravital microscopy. Together with Prof. Adrian Hill, we hope to develop a novel vaccine platform able to generate these protective tissue-resident CD8 T-cells, in the prospect of improving future CD8 T-cell mediated vaccines against hepatic diseases, specifically liver-stage malaria.
Adrian V.S. Hill is Professor of Human Genetics and Director of the Jenner Institute at Oxford University. He leads research programmes in both the genetics of susceptibility to tropical infectious diseases and in vaccine development. The Jenner Institute links human vaccine research at the University of Oxford with veterinary vaccine development at The Pirbright Institute and the UK Animal and Plant Health Agency. The Institute is currently conducting Phase 1/2 trials for malaria, tuberculosis, pandemic influenza, meningitis, HCV, RSV and HIV.

His group has designed and developed candidate vaccines for malaria currently in field trials in endemic countries. His group have undertaken over fifty clinical trials to evaluate new vaccine technologies. In 2014 he led the Oxford-based trials of two candidate Ebola vaccines and rapidly demonstrated their safety and immunogenicity.

He has published about 500 research papers and is a Fellow of the UK Academy of Medical Sciences and of the Royal College of Physicians, a NIHR Senior Investigator and Wellcome Trust Senior Investigator.
Alison is the Technikos Professor of Biomedical Engineering at the University of Oxford and Director of the Institute of Biomedical Engineering. Her university research group is internationally known for its work on biomedical image analysis, and in particular ultrasound image analysis and inter-disciplinary application of the technology in the developed and developing world. She was the recipient of the inaugural IFMBE Laura Bassi award in 2015 and a European Research Council (ERC) Advanced Grant in 2016.

Throughout her career she has combined research with training early career researchers, playing an influential role in setting up biomedical engineering education programmes at the undergraduate and postgraduate level at Oxford, and having supervised or co-supervised over 50 PhD students to successful completion.

Alison is currently, or has been, a member of numerous RCUK, Royal Academy of Engineering and Royal Society strategic and policy making committees and grant awarding panels. She is the former President of the MICCAI Society, the international society in her field, and has recently been elected to the Board of Trustees of the Institution of Engineering and Technology (IET).

She received an OBE for services to science and engineering in 2013.
Liz Robertson is a Wellcome Trust Principal Research Fellow and Professor of Developmental Biology in the Dunn School of Pathology. Liz did her PhD then post-doc in Cambridge where, working together with Allan Bradley in Martin Evans lab, she successfully established the first mouse embryonic stem cell lines and showed they routinely colonized the mouse germ line. Retroviral vectors were exploited to generate random mutations, and her subsequent phenotypic screens led to the cloning of Sry, the mammalian sex determining gene and the TGF-b-related Nodal gene.

Liz moved to the US in the late 1980s to join the faculty of the Department of Genetics and Development at Columbia University Medical School. At Columbia University, Liz published the first successful use of gene targeting to generate a genetically modified mouse strain. With Arg Efstratiadis she discovered that the Igf2 locus is subject to parental imprinting, identifying the first mammalian gene controlled in this manner. She was recruited to Harvard FAS in 1992, where for the next decade she worked extensively on the Nodal signalling pathway uncovering the critical role played by the Nodal in patterning the early embryo and specifying the left-right body axis. Since moving to Oxford 12 years ago, her work has demonstrated that the T-box factor Eomes functions downstream of Nodal/smads signals in specifying the definitive endoderm and cardiovascular lineages during gastrulation.

Most recently her lab has been studying the zinc-finger transcriptional repressor Blimp1/Prdm1 activated downstream of dose-dependent Bmp/Smad signals, and shown that Blimp1 governs specification of the germ cell lineage, regulates maturation of the gut endoderm and is required for formation of the invasive trophoblast lineage.

Liz is a Fellow of the Royal Society and the Academy of Medical Sciences, and a member of EMBO and the Academia Europaea. She is a former Chair of the British Society for Developmental Biology.
Professor David I. Stuart, FMedSci, FRS

Prof David I. Stuart currently holds two positions; the first as Joint Head of the Division of Structural Biology at the University of Oxford and the second as the Life Sciences Director at Diamond Light Source, Didcot, where he pursues interests in Synchrotron radiation; as well as these roles Prof Stuart is also the Director of INSTRUCT, a pan-European infrastructure project which aims to develop and provide access to cutting edge technologies for integrative Structural Biology.

Prof Stuart’s principal research interests include the structure of viruses and viral proteins as well as cellular proteins, especially those that interact with viruses. Over a number of years, in addition to structures of a large number of proteins and protein complexes his group has determined the structures of a wide range of viruses, including foot-and-mouth disease virus, bluetongue virus and the membrane containing phages PRD1 and PM2. These were at the time, and remain, some of the most complex structures determined in atomic detail. Furthermore they provided profound insight into the function of the viruses and are currently underpinning efforts aimed at improved vaccines for some of the most economically important viruses infecting livestock.

Amongst his many accolades Prof Stuart was awarded the FEBS Anniversary Prize in 1990; elected a Fellow of the Royal Society in 1996, a member of EMBO in 1997 and a Fellow of the Academy of Medical Sciences in 2006. In 2006 he was awarded (along with S Harrison, Harvard) the Aminoff Prize by the Royal Swedish Academy of Sciences and in 2007 was awarded the ECA Max Perutz Prize.