



UIG/ISI 2010 SPEAKER BIOGS

DANGEROUS LIAISONS – PATHOGENS AND THE IMMUNE SYSTEM

2-3 SEPTEMBER 2010

Queen's University Belfast

DAVID ADAMS



David Adams is professor of Hepatology and director of translational research in the MRC Centre for Immune Regulation at the University of Birmingham. He is also director of the NIHR Biomedical Research Unit for Liver disease at the Queen Elizabeth Hospital. His clinical interests are transplant hepatology and autoimmune liver disease. Laboratory research is focused on mechanisms of immune-mediated liver disease. After initial training in hepatology in Birmingham he continued his immunology training with Dr Stephen Shaw at the Experimental Immunology Branch of the National Cancer Institute, Bethesda, USA before being appointed to the Chair of hepatology in Birmingham in 1997. He was made a Fellow of the Academy of Medical Sciences in 2000. He has a long-standing interest in understanding how leukocyte-endothelial interactions regulate the recruitment of effector cells to inflammatory sites and his group have defined molecular

mechanisms used by hepatic endothelium to control the entry of leukocytes from the blood into the liver. They have recently begun to use this information to develop cell therapy for liver disease by targeting pathways involved in the recruitment of damaging effector cells or by promoting the recruitment of therapeutic cells including dendritic cells, stem cells and regulatory T cells that may be used to manipulate immune responses therapeutically. Email d.h.adams@bham.ac.uk

CHARLES BANGHAM



Charles Bangham read Natural Sciences and then Medical Sciences at the University of Cambridge, graduating in 1976. After a year in Nepal carrying out research on the genetics and physiology of the Sherpa ethnic group, he studied clinical medicine at the University of Oxford, graduating BM BCh in 1980 and Member of the Royal College of Physicians in 1983. He then carried out a PhD in immunology (1987), spending by arrangement two years each at the National Institute for Medical Research in Mill Hill (London) and the University of Oxford. Awarded a Wellcome Trust Senior Basic Biomedical Fellowship in 1987, he was appointed to the Chair of Immunol-

ogy in Imperial College London (St Mary's) in 1995. He has carried out research on infection with the human leukaemia virus (HTLV-1) for over 20 years. He uses a multi-disciplinary approach, studying the immune response, host and virus genetics, gene expression, cell biology, and mathematical aspects of immune and viral dynamics. In 2003 he was elected a Fellow of the Academy of Medical Sciences, and in 2006 he was awarded the degree of Doctor of Science (ScD) by the University of Cambridge.

ASSAQ BELAAOUAJ



Azzaq Belaaouaj is currently Research Director at Inserm and Director of the 'Inflammation and Immunity of the Respiratory Epithelium' research unit at the University of Reims, France. He was previously Assistant Professor in the Departments of Medicine (Pulmonary Division) and Molecular Microbiology, Washington University, St. Louis, MO, USA (2001 – 2005). His research focuses on the role of neutrophil serine proteases in acute and chronic lung inflammation.

MARTIN CRANAGE



Martin Cranage holds the Sir Joseph Hotung Chair of Molecular Vaccinology at St George's, University of London. His background is in translational immunovirology applied to diagnostics and vaccine discovery. He obtained a PhD from the University of Newcastle upon Tyne characterising immune responses to respiratory syncytial virus. For the next 5 years he worked with Robin Coombs in Cambridge developing novel rapid immunoassays for virus detection before moving to Tony Minson's lab to explore the potential of human cytomegalovirus glycoproteins as targets for vaccination. Subsequently, at the Centre for Applied Microbiology and Research at Porton

Down, he worked on AIDS vaccine discovery and development using the simian immunodeficiency virus model. This research has continued at SGUL where his team works closely with Robin Shattock's team. The primary focus of the group is on the prevention of HIV (SIV) infection at the virus portals of entry by the use of novel microbicide and vaccination approaches.

PADRAIC FALLON



Padraic Fallon is SFI Stokes Professor of Translational Immunology, School of Medicine, Trinity College Dublin. Formally he was a Wellcome Trust Fellow, in the Department of Pathology, University of Cambridge, U.K. His research involves the use of animal and cellular models to study the mechanisms of inflammation, with the objective to develop novel therapeutic strategies for the treatment of inflammatory or autoimmune diseases.



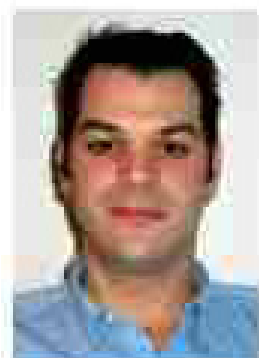
DEREK GILROY



In 1997 Derek Gilroy obtained his PhD from the William Harvey Research Institute (WHRI) for investigating the role of inducible cyclooxygenase in inflammation working with the late Professors Derek Willoughby and Sir John Vane. Thereafter, he received postdoctoral training with Dr. Kenneth Wu, jointly at the University of Houston Texas and at Academia Sinica, Taipei, Taiwan. He returned to the WHRI for a further 4 years. In 2004, Derek was appointed as New Blood lecturer funded as a Wellcome Trust Career Development Fellow at the Division of Medicine, University College London. In 2009 he became a Wellcome Trust Senior Research Fellow and

in 2010 Professor of Experimental Medicine. At UCL, his research focuses on examining the molecular and biochemical pathways that regulates the resolution of acute immune reactions. Prof. Gilroy has won the Bayer International Young Investigator Award for aspirin Research, 2005 and the British Pharmacological Society, Norvartis Award, 2007.

ADRIEN KISSENFENNIG



Adrien Kissenpfennig is a lecturer of Molecular and Cellular Biology in the Centre for Infection and Immunity at Queen's University Belfast. He graduated from Edinburgh University in 1993 with a B.Sc. in Biological Sciences (Honours Genetics), and went on to accomplish his PhD on prion protein gene regulation at the Institute for Animal Health, Neuropathogenesis Unit, Edinburgh. He then joined the group of Professor Bernard Malissen in 1997 at the Centre of Immunology Marseille-Luminy to develop novel animal reporter and ablation models to decipher the role of key immunological cells in collaboration with Schering-Plough. Establishing DNA "recombineering" technology at the CIML facilitated the development of "a la carte" germ-line modifications to address specific questions about immunological mediators.

During his time at the CIML, he also co-managed the KO/KI Booster core transgenic facility. His research over the last 10 years has focused on dendritic cell (DC) biology, in particular CD207 (the C-type lectin langerin) expressing DC subsets and creating novel models to study their function, which have since made important contributions to understanding the importance of Langerhans cells of the skin. Since his arrival at Queen's University Belfast in 2006 his research has primarily focused on the importance of dendritic cells in peripheral tissues and how they orchestrate inflammatory or tolerogenic immune responses utilising in vivo models of disease. In particular, his groups are interested in understanding the role of pulmonary dendritic cell subsets and their importance in regulating the immune response to viral infections. Furthermore, in collaboration with Prof Jim Johnston his group also focuses on deciphering the role of suppressors of cytokine signalling (SOCS) in dendritic cells and how they these molecules modulate their effector function in inflammatory diseases.

MARCUS MALL



Marcus Mall is currently Head of the Division of Pediatric Pulmonology & Allergy and Cystic Fibrosis Center and Group Leader at the University of Heidelberg / EMBL Molecular Medicine Partnership Unit (MMPU) at the University of Heidelberg. He was previously Assistant Professor at the Division of Pulmonary Diseases and Critical Care Medicine, Department of Medicine, University of North Carolina at Chapel Hill, USA. His research focuses on the link between epithelial Na⁺ channels (ENaC), airway surface dehydration and chronic airway inflammation

ANDREW MCMICHAEL



Andrew McMichael qualified in Medicine from Cambridge and St Mary's Hospital Medical School in 1968 and obtained a PhD in Immunology at NIMR supervised by Ita Askonas and Alan Williamson in 1974. He first showed that virus specific CD8 T cells were HLA restricted and, later, Alain Townsend in his group demonstrated that virus derived peptides were presented to T cells by MHC class I molecules. Since 1987 he has studied the T cell response to HIV, with a particular interest in virus escape from T cell recognition during acute infection. For the last five years he has focussed on HIV vaccines. His group have designed and tested two candidate HIV vaccines in phase I clinical trials. His group has also been involved in developing novel

methods for measuring T cell responses, such as HLA tetramer staining.

He is Director of the Weatherall Institute of Molecular Medicine in Oxford University and is Honorary Director of the Medical Research Council Human Immunology Unit He was knighted in 2008 for services to medical sciences.

STEFAN NIEWIESK



Stefan Niewiesk studied veterinary medicine at Tierärztliche Hochschule Hannover, graduating in 1988, and obtained a PhD from the University of Wuerzburg, Germany, in 1991. He was a postdoctoral fellow at the Institute of Molecular Medicine at the University of Oxford in 1992-1993. He returned as a team leader to the Institute of Virology, University of Wuerzburg, from 1994 to 2003. In 2003 he moved to the Department of Veterinary Biosciences, College of Veterinary Medicine, Ohio State University, USA, where he is currently Associate Professor.

His research interests are animal modeling and the study of infectious diseases. Most of his work has been focused on the pathogenesis of respiratory infections (measles virus, RSV, human parainfluenza virus) using the cotton rat (*Sigmodon hispidus*) model.

His special interest is to understand mechanistic aspects of vaccine development and problems associated with vaccination like inhibition of vaccination by maternal antibodies.

RICHARD RANDALL



Rick Randall completed a B.Sc. (Hons) in Microbiology/Biochemistry at the University of Leeds in 1974, and then a Ph.D. at Leeds (1978), working on herpes simplex virus. He then spent a year in Belgium working on Hepatitis B virus and running a hepatitis diagnostic laboratory. In 1979 was a temporary lecturer in Virology at Reading University (for 1 year) before moving to the National Institute for Medical Research, Mill Hill to work with Bob Honess on herpesvirus saimiri. In 1985 moved from Mill Hill to a lectureship at St. Andrews University. His major research interests focus on how paramyxoviruses and influenza viruses interact with innate immune responses, in particular the interferon response.



ANTONIO SICA



Antonio Sica obtained his PhD in Pharmacology at the Istituto di Ricerche Farmacologiche Mario Negri, Milan, in 1989. During his scientific career he has provided contributions to the field of Inflammation and Immunity. He provided the first description of the divergent regulation of chemokine receptors and ligands, in response to pro- and anti-inflammatory signals. During the last ten years he focused his attention on the investigation of inflammatory cells and molecules expressed within the tumor microenvironment and their role in tumor development. A central aspect of this research is the phenotype of Tumor-Associated Macrophages and the significance of their inflammatory programs in tumor progression. The significance of microenvironmental signals, including hypoxia, in the modulation of immune cell functions is another important aspect of his studies. He has recently identified the p50 NF- κ B subunit as a master regulator of M1 versus M2 polarized inflammation and described its significance in diseases associated with polarized inflammatory responses, including allergy, infection and cancer.

CASEY WEAVER



Prof. Weaver is Professor of Pathology, Medicine and Microbiology at University of Alabama at Birmingham (UAB). He received his B.S. (1979) and M.D. (1984) degrees from the University of Florida. His residency and post-doctoral training were completed at Barnes Hospital and Washington University in 1989. He was an Assistant Professor in the Department of Pathology at Washington University until joining UAB in 1992.

The research in Prof. Weaver's laboratory focuses on the mechanisms by which CD4 T cells control adaptive immunity. Major current projects concern the generation and characterization of transgenic and knock-in mouse models for tracking T cell fate during CD4 effector and memory T cell development; studies defining mechanisms that induce development of the Th17 effector lineage; the characterization of mechanisms by which dysregulation of CD4 T cells leads to inflammatory bowel disease; the delineation of the adhesion pathways that control effector T cell trafficking; and, the characterization of the genetic elements that regulate cytokine gene expression in Th1 and Th17 cells.

His seminal contributions to our understanding of CD4 T cell responses have been published in top journals including *Nature*, *Nature Immunology*, *Immunity*, and *Journal of Experimental Medicine*. His expert reviews have featured in journals such as *Annual Reviews in Immunology*, *Advances in Immunology*, *Current Opinions in Immunology*, and *Immunity*.

DAVID WOODLAND



Dr. Woodland earned his B.Sc. at the University of Bath in the UK and his Ph.D. at the Max Planck Institute for Immunobiology in Freiburg, Germany. His subsequent research career has focused on various aspects of host defense to infection, first at the National Jewish Center in Denver, CO, and later at St. Jude Children's Research Hospital in Memphis, TN. He is currently the President and Director of the Trudeau Institute in Saranac Lake, NY, where he runs a federally funded basic research program that is directed at understanding immunity to pulmonary infections (both viral and bacterial). He is the Editor in Chief of the journal "Viral Immunology", serves on the advisory boards of several organizations, and is a member of the American

Association of Immunologists and the Faculty of 1000.

ARTURO ZYCHLINSKY



Prof Arturo Zychlinsky studied Biology at the Instituto Politecnico Nacional, Mexico City (1980-1985), Mexico. He received his Ph.D in Immunology from the Rockefeller University, New-York, USA in 1991. He was a Post-Doctoral fellow for two years at the Pasteur Institute, Paris, France. From 1993-2001, he was Professor at the Skirball Institute and Department of Microbiology at the New York University School of Medicine, USA.

In 2001, he was appointed director of the Department of Cellular Microbiology at the Max Planck Institute for Infection Biology, Berlin, Germany.

Prof Zychlinsky has made important discoveries on the role played by neutrophils in the destruction of pathogens such as Shigella, Salmonella, and Yersinia. His group has shown that neutrophil elastase cleaves virulence factors thus destroying the invasion apparatus of bacteria and trapping the bacteria in vacuoles.

Prof Zychlinsky was a pioneer in the discovery of Neutrophil Extracellular Traps (NETs). Neutrophils can also kill bacteria by extruding NETs which are composed of chromatin, coupled with anti-bacterial granule proteins.