



NFOTW-Speakers

- **Prof Andrew Lotery**. Professor of Ophthalmology, University of Southampton. Lead of Clinical Trials Group (commercial and NHS funded). Principal Investigator on different charity funded research. Southampton, UK. “What patients want”

Professor Andrew Lotery is Professor of Ophthalmology within Medicine at the University of Southampton. As a clinician scientist his research is driven by interactions with patients. He works from bench to bedside using laboratory techniques such as molecular genetics and cell biology to study common causes of blindness such as age related macular degeneration (AMD) and glaucoma. His laboratory work is complemented with clinical trials undertaken in Southampton Eye Unit.

He is best known for his genetics research in retinal diseases. He has identified the genetic determinants of retinal diseases and helped to translate these into new therapies such as complement inhibitors for the commonest cause of blindness, age related macular degeneration (AMD). His innovative research in macular disease was recognised internationally by his 2004 election to the United States Macula Society. He is one of the top UK clinician scientists in eye disease as demonstrated by his election as an NIHR senior investigator in 2008 and The Times listing him in their 2010 Top 100 Doctors list.

His influential research was recognised by the Royal College of Ophthalmology (RCOphth) who awarded him the Nettleship medal in 2009 for his Lancet paper on AMD genetics. He received the 2012 special award for excellence from the Macular Disease Society and the 2014 University Hospital Southampton Innovation Award. He is editor-in-chief of the Nature publication: Eye since 2008 and former President of the Southern Ophthalmological Society.

In influencing policy to improve health and wealth, Andrew has been a member of the Department of Transport’s honorary medical advisory panel on driving and visual disorders since 2013. He has acted as a nominated clinical expert to The National Institute for Health and Care Excellence (NICE) technology appraisal panels that have resulted in major changes in management of AMD and vitreo-macular traction.

As co-chair of the RCOphth academic committee, he initiated co-funded clinical training fellowships with the MRC. Andrew is specialty lead for the Wessex Clinical Research Network spearheading a major increase in clinical trials in Wessex over the last 5 years. He has contributed significant AMD samples to an international effort to find novel genetic determinants for AMD. This has resulted in over 20 novel genes been identified.

Research interests; Andrew is interested in understanding the molecular basis of ophthalmic diseases. His University laboratory identifies genetic determinants of eye disease and studies defined mutations in patient derived induced pluripotent stem cells. New therapeutic approaches are also being explored such as gene therapy and retinal cell transplantation. He also leads a dynamic clinical trials team which has participated in many landmark clinical trials developing new treatments for both common conditions such as age related macular degeneration and also rare conditions such as choroideremia

- **Dr Paul Kenna**. Research Ophthalmologist. The Research Foundation, The Royal Victoria Eye and Ear Hospital Dublin and The Ocular Genetics Unit, Trinity College Dublin (Ireland). “Autosomal Dominant Retinitis Pigmentosa”

Dr Paul Kenna is a Senior Clinical Research Fellow in the Ocular Genetics Unit at the Smurfit Institute in Trinity College and has collaborated with Prof. Peter Humphries and Dr. Jane Farrar for over 15 years in investigations into the molecular genetic causes of inherited blindness, blistering skin disease and brittle bone disease. This work has resulted in the identification of a number of novel disease-causing genes in these conditions, including the first gene to be implicated as causative in any form of autosomal dominantly inherited RP. A fully trained clinical ophthalmologist, in recent years he has focused on the delivery of potentially



therapeutic gene constructs to the degenerating retina in murine models of inherited retinopathies and in the analysis of the effects on retinal function.

Dr. Kenna has developed considerable expertise in the electrophysiological assessment of retinal function in animals and humans. Together with Dr. Jane Farrar and Prof. Peter Humphries he holds three patents on strategies designed to overcome genetic heterogeneity in autosomal dominant diseases and is a founder of Optigen Technologies, a Trinity College campus company established to exploit these patents.

• **Dr David Kent.** Consultant Ophthalmologist. The Vision Clinic, Kilkenny (Ireland). *“Inflammation and the Retina: is it always bad?”*

David Kent is a consultant ophthalmic surgeon sub-specialising in medical and surgical retina in Aut Even Hospital Kilkenny and Barringtons Hospital Limerick. He completed his residency training in St Paul's Eye Unit, Liverpool and his 2 year retina fellowship at the Wilmer Eye Institute, Johns Hopkins.

He was awarded his MD from the University of Liverpool for his thesis on retinal detachment and tissue repair. His current research focus is on the role of stem cells in diabetic retinopathy. He is an honorary research fellow at the University of Liverpool and Visiting Professor to Indianapolis University

• **Prof Alan Bird.** Honorary Consultant Ophthalmologist at the Moorfields Eye Hospital; Emeritus Professor, Institute Of Ophthalmology, University College London (UK). *“Selection of early AMD patients for clinical trials: more than one disease”*

Alan C. Bird is best known for his work on retinitis pigmentosa and research into inherited retinal degeneration. This research focused on the clinical and genetic documentation of families who exhibited retinal dystrophies and identification of the genes responsible for the retinal disorders.

Dr. Bird was born in London. He studied neurology and neurosurgery and earned his medical degree from University of London at Guys Hospital. Later, he turned to ophthalmology and completed a residency at Moorfields Eye Hospital and a fellowship in neuro-ophthalmology at Bascom Palmer Eye Institute in Miami, Florida. In 1969, he returned to London and took a staff appointment at the Institute of Ophthalmology at Moorfields, where he remained until the end of his career.

In the 1970s, Dr. Bird's interest in the retina emerged and he concentrated on degenerative and inherited diseases. While at the Institute of Ophthalmology, he worked with numerous fellows in a variety of multidisciplinary activities involving electrophysiology, specialized imaging, psychophysics, immunology, and pathology. This multidisciplinary and collaborative research has resulted in the development of new technologies to define the clinical characteristics of retinal disease. His studies have also correlated abnormal gene expression with metabolic dysfunction at the cellular level. This work has led to a clearer understanding of retinal degenerative diseases, with significant implications for clinical management relative to better genetic counseling for patients and the examination of new approaches for treatment, including gene therapy.

Dr. Bird has written more than 370 papers published in refereed journals as well as 70 book chapters. In recognition of his work, he has received The Duke Elder, Doyne and Bowman medals in Great Britain, and the Prix Chauvin in France. His named lectures include the Jules Stein Lecture (UCLA), the Krill Memorial Lecture (Chicago), the Bjerrum Lecture (Denmark), the Ernst Custodis Lecture (Germany), the Ilmari Rendahl Lecture (Sweden), the Donders Lecture (Holland), the Edward Jackson Lecture (AAO), the Jules François Lecture (Belgium), the William Mackenzie Medal (Scotland), the Wright Lecture (University of Iowa), the Lang Lecture (Royal Society of Medicine), and the Clement McCulluch Lecture (University of Toronto). He is an Honorary Fellow in The Royal Society of Medicine and the American College of Surgeons. In 2004, he received the Helen Keller Prize for Vision Research.



- **Dr Breandan Kennedy (NFOTW Organiser)**. Senior Lecturer and Principal Investigator in UCD SBBS – Conway Institute, University College Dublin (Ireland). “*Phenotype based discovery of novel drugs for blindness*”

Principal Investigator from 2003 to present in UNIVERSITY COLLEGE DUBLIN: Senior Lecturer, College Lecturer in School of Biomolecular & Biomedical Sciences, Career-track Investigator, Conway Institute. The goal of his research team is to develop genetic and pharmacological treatments for human blindness. Using zebrafish as an in vivo system, we have identified several families with inherited blindness and have used these to characterise disease progression and evaluate therapies. We have also developed in vivo assays enabling us to discover novel drugs with specific neuroprotectant, anti-angiogenic or toxic properties in the eye. Technology platforms include: zebrafish development, expression profiling, genetics, transgenics, morphants and drug screens; Retina: Morphology and Function.

He was Postdoctoral Fellow (2000-2003) in UNIVERSITY OF WASHINGTON, SEATTLE, USA: Senior fellow in Prof. James Hurley’s lab. Projects analysed eye development using mutant zebrafish and investigated cone photoreceptor function using transgenic zebrafish, and in UNIVERSITY OF NOTRE DAME, INDIANA, USA: Postdoctoral fellow in Prof. David Hyde’s lab. Projects include characterization of promoters directing rod photoreceptor-specific expression in transgenic zebrafish.

- **Dr Javier Terriente**. Chief Science Officer in Ze-Clinics, Barcelona (Spain). “*ZeClinics. Drug discovery through zebrafish*”

Javier Terriente did his PhD at Centro de Biología Molecular-Severo Ochoa (CSIC/Spain). A 5 years postdoctoral stay at the National Institute of Medical Research (MRC/UK) and 4 years as Associate Professor at the Department of Experimental and Health Sciences (UPF/Spain). As an academic, he has published several papers in the fields of developmental neurobiology and cancer genetics using zebrafish.

From 2014 he is co-founder and Chief Scientific Officer at ZeClinics (www.zeclinics.com), a biotech company specialized in exploiting zebrafish for assessing the safety and efficacy of novel molecules during the preclinical phase of drug discovery

- **Dr Torsen Meiners**. EU Openscreen Communications Manager. FMP Leibniz-Institute of Molecular Pharmacology, Berlin (Germany). “*EU-OPENSREEN - Facilities for drugscreening*”

Torsten Meiners is a trained biologist and investigated the chemical ecology of plant-insect interactions as assistant professor at the Freie Universität Berlin. Since 2011 he works on IPR, communication and fundraising issues for EU-OPENSREEN at the Helmholtz-Centre of Infection Research in Braunschweig and at the Leibniz-Institute for Molecular Pharmacology FMP.

This European infrastructure for Chemical Biology with its distributed screening and chemistry platforms supports life science research and its translation to medicine, agriculture, bioindustries and society and will start operation in 2017.

- **Dr Alfonso Blanco**. Director of Conway Core Facilities, UCD SBBS – Conway Institute, University College Dublin (Ireland). “*How can Cytomics help you in Drug Discovery?*”

Alfonso Blanco is the Director of the Flow Cytometry Core Technologies in the University College Dublin, European distributor and Instructor of ExCyte. Expert Cytometry, Co-Director and founder of the Cytometry Society of Ireland and Councilor of ISAC (International Society for the Advancement of Cytometry).

Alfonso organizes the UCD Summer School, as well as the ExCyte courses in Europe. He is the co-organiser of several courses such as the Karolinska Institute Flow Cytometry course or the ESCCA Summer Schools. Involved in the development of CYTOUniversity material and acts as member of the ISAC Educational and ISAC Share Resource Lab Task Forces, as well as member of the European Society of Clinical Cytometry Analysis ESCCA Website & Communication Committee and ESCCA Membership Committee and Facebook administrator of ISAC, ESCCA and CSI Facebook sites.



Alfonso Blanco has won the Accuri's Creativity Awards 2009 "Innovative Applications of Flow Cytometry", the Irish Laboratory Awards 2013 "Laboratory Staff Member of the Year" and was finalist of the Irish Laboratory Awards 2013 "Educational Laboratory of the Year" and has been selected by ISAC as one of the five 2010 ISAC Scholars.

- **Dr Thakur Raghu Raj Singh**, Lecturer in Pharmaceutics in the School of Pharmacy and PI in Advanced Polymeric Drug Delivery Systems, Queen's University Belfast (UK). *"Minimally-Invasive and long-acting ocular drug delivery strategies"*

Dr Thakur is Lecturer in Pharmaceutics in the School of Pharmacy, Queen's University Belfast. He has obtained his PhD in Drug Delivery from School of Pharmacy, Queens University Belfast (2009), M.Sc in Pharmaceutical Sciences from University Science Malaysia (2006) and B.Pharm from Jawaharlal Nehru Technological University, India (2002).

Dr Singh's research interests is in the design and physicochemical characterisation of advanced polymeric drug delivery systems for ocular, transdermal and topical applications. In particular, his current research involves fabrication and design of novel long-acting implants and medical devices for ocular drug delivery. Dr Singh has authored over 90 scientific publications, including 40 full papers and two textbooks.

He has been an invited speaker at a number of national/international meetings and Editorial Board member of 4 international peer-reviewed journals. His ocular drug delivery work has led to a university spinout, Re-Vana Ltd. Re-Vana, has been shortlisted as the Top 18 in the UK and Top 40 global Healthcare/Life science Startups by MassChallenge 2015 - World's Largest Startup Accelerator. Re-Vana has also secured a position within the Top 12 finalist in Invent 2015 competition.

- **Prof Abhay Pandit**, Professor of Biomedical Engineering at National University of Ireland, Galway (Ireland). *"Understanding the host for designing drug delivery systems"*

Professor Abhay Pandit, a Professor in Biomedical Engineering, is the Director of the recently established 'Network of Excellence for Functional Biomaterials (NFB)'. Having joined the NCBES in 2002, he has played in immeasurable role in the development of biomaterials and tissue engineering research at NUI Galway. In recognition of the progress achieved thus far and the potential impact of research in the field of biomaterials, he received funding from Science Foundation Ireland (SFI) which has led to the establishment of NFB, a strategic research cluster (SRC) which is an extension of the world-class biomedical research currently being carried out at the NCBES.

Prof Pandit has over 20 years experience in the field of designing biodegradable biomaterials. He pursued his postgraduate degree under the guidance of Prof Dale Feldman at the University of Alabama at Birmingham. The Feldman laboratory worked on the treatment of pressure ulcers using biomaterials for growth factor delivery, linking the laboratory to the clinic, allowing students to gain first hand experience of the clinical output of their research through interactions with clinical staff and patients. This direct clinical-patient interface was unique in the Feldman laboratory and cemented Prof Pandit's decision to continue researching biomaterials.

He is currently involved in a range of funded collaborative projects with Professor Mauro Alini from AO Research Institute in Davos, Switzerland, on disc repair. He collaborates with several researchers in REMEDI on designing biomaterials for gene and cell delivery, while active research collaborations have been established with Prof. Anthony Windebank's team in the Mayo Clinic on development of neural biomaterials. In addition, Prof. Pandit is working with Dystrophic Epidermolysis Bullosa Research Association (DEBRA), a charity that seeks to develop strategies towards treatment of blistering wounds in the treatment of Epidermolysis Bullosa.



- **Prof Clive G. Wilson**, E.F.A.P.S., F.C.R.S., J P Todd Professor of Pharmaceutics. Education Liaison & Senate, European Federation for Pharmaceutical Sciences. Strathclyde Institute of Pharmacy and Biomedical Sciences Glasgow, Scotland (UK). “Do we have the hand to win the game?”

Clive Wilson is the J. P. Todd Professor of Pharmaceutics at Strathclyde University and serves on the European Union Federation of Pharmaceutical Sciences teaching and overseas liaison committee. He completed his Ph.D. with Professor Dennis Parke in drug metabolism at the University of Surrey. His first position was an Asthma Research Council Fellow at the Cardiothoracic Institute, London becoming a Lecturer in Biochemical Pharmacology and moving to Nottingham Medical School to become Reader in Applied Pharmacology.

Major areas of research have been the study of the behaviour of drug formulations in man. With colleagues at Nottingham, he pioneered applications of scintigraphy in the study of physiological and patho-physiological effects on drug absorption following oral, nasal, pulmonary and ophthalmic delivery. In the university, his group collaborates with industry on ophthalmic drug delivery projects especially related to the behaviour of ocular implants. He is a member of the steering group of the IMI OrBiTo programme and co-manages the Strathclyde group with Professor Gavin Halbert. Recent new areas of interest include additive soft and hard matrix technologies for drug delivery, and several programmes in novel therapies for treating ulcerative colitis.

Primary Teaching activities are in the field of Biopharmaceutics and formulation research.

- **Prof Brendan Buckley**, ICON Chief Medical Officer, Dublin (Ireland). “Bringing discoveries from the bench into man in a regulated world”.

An endocrinologist with over 30 years’ experience, Brendan joined ICON through the acquisition of Firecrest Clinical in 2011, where he was one of the founders of the company and Senior Vice President of Medical Affairs. Brendan has extensive experience in clinical trials and chairs several independent Data and Safety Monitoring Boards for medium to large cardio-metabolic and rare disease clinical studies. Brendan is Clinical Professor of Medicine and Pharmacology at the School of Medicine, University College Cork (UCC), Ireland, and has also been director of the university’s European Center for Clinical Trials in Rare Diseases. He has been a board member of the Irish Medicines Board and of the European Medical Agency (EMA)’s Scientific Advisory Group for Diabetes and Endocrinology since 2005. He was also a member of the EMA Committee for Orphan Medicinal Products from 2000-2003 and a member of the EMA’s panel of experts. Professor Buckley is also chairman of the Irish Statutory Anti-Doping Agency and is a member of the UK Anti-Doping Scientific Advisory Board.

In 2013, Professor Brendan Buckley was appointed Chief Medical Officer of ICON plc, a global provider of outsourced development services to the pharmaceutical, biotechnology and medical device industries. In this role, Professor Buckley is the ICON’s lead medical expert, representing the company’s position on key scientific, ethical and medical governance matters and he will also provide guidance and oversight to the medical and scientific groups across ICON.

- **Dr Brian Fennell**, PI in Global Biotherapeutics Technologies, Pfizer. Dublin (Ireland). “Multi-parametric optimisation and characterisation of antibody binding domains for chronic dosing.”

Brian Fennell is a Principal Scientist and research group leader in Global Biologic Therapeutics Dept. (GBT), at Pfizer, Grange Castle, Dublin. He’s been working in the Dublin group for over eight years which is responsible for the discovery and molecular engineering of novel protein therapeutics to treat a wide range of human diseases. Prior to joining Pfizer, Brian was awarded an IRCSET fellowship and worked as a Post-Doctoral researcher focusing on tubulin as a potential drug target in the malarial parasite Plasmodium falciparum at the Moyne Institute of Preventive Medicine, Trinity College Dublin.

He obtained his Bachelor of Science Degree from University College Dublin (UCD) and his PhD from the Trinity College Dublin (TCD). Brian has attended numerous scientific workshops and conferences and has published book chapters and original research in numerous journals such as The Journals of Molecular Biology, Journal of Biological Chemistry, Immunology, mAbs Journal and Antimicrobial Chemotherapy.



• **Dr Robert Haigh**, Chief Operating Officer at KalVista, Porton Down (UK). *"Plasma kallikrein as a target in diabetic macular edema"*

Robert holds a Masters in Biochemistry and a PhD in Medicine, both from Manchester University. Following a successful Research Fellowship at Oxford University, he began his pharmaceutical career in drug discovery and has held positions of increasing responsibility in R&D during a 20-year career with Boehringer Ingelheim, Ferring Pharmaceuticals and Vantia Therapeutics.

As Managing Director and VP Research at Ferring, Robert led the spin-out of the UK site in 2008 to become a Founder of Vantia Ltd. Robert was instrumental to the acquisition of KalVista's discovery assets from Vantia, where he was previously CSO and had delivered successful discovery programs and novel targets.

During his career, he has lived and worked in the UK and Germany and has held board level positions in Europe and the USA.

Robert is a co-founder of KalVista Pharmaceuticals.

• **Dr Rob Jones**, Co-founder of the SME and Diabetes Project Manager at the CRO RenaSci, Nottingham (UK). *"Preclinical Models to study Obesity and Diabetes"*

Before helping to establish the CRO company RenaSci in 2001, Rob was Section Leader in Obesity Research at BASF Pharma, Nottingham with responsibility for peripherally-acting antiobesity agents and for collaborative antiobesity research projects. Between 1982 and 1995, Rob was Section Leader/Team Leader of antidiabetic and ischaemic heart disease projects at Boots Pharmaceuticals. Rob holds a PhD in Pharmacology from the University of Wales, Cardiff and a MBA in Financial Studies from the University of Nottingham. He has over 50 scientific publications.

• **Prof Yihai Cao (Plenary lecture / Conway Class Seminar Conway)** Professor at the Microbiology and Tumor Biology Center in Karolinska Institutet and founder of Clanotech, Stockholm (Sweden). *"Targeting angiogenesis and fibrosis for treatment of eye disease"*

Yihai Cao is an international leading scientist in vascular biology and he is a highly talented, imaginative and creative scientist. His scientific originality has led to establish a new research field of controlling metabolic diseases by targeting angiogenesis. Cao will continue to do groundbreaking research and will lead the field of angiogenesis research. Cao, born in Shandong, China, received his medical training at the Medical School, Shandong University in 1983. 1983-1986, he received further basic and clinical training from the Chinese Academy of Medical Sciences and from the Ludwig Institute for Cancer Research, Switzerland. He obtained his Ph.D. degree in 1993 from the Karolinska Institutet, followed by a 3-yr postdoctoral training period at the Harvard Medical School, Children's Hospital (Dr. Judah Folkman's Laboratory), Boston, Massachusetts.

He returned to the Karolinska Institutet in 1996 and became a full professor in 2004. He received an honorary medical degree (M.D.) from Copenhagen University, Denmark in 2006. He is currently a guest professor at the Linköping University, Sweden. He has recently appointed as an honorary professor at the Leicester University, UK; and becomes an honorary professor at the Copenhagen University, Denmark. He is also honored a professorship at the Shinshu University Japan. He received the Fernström research prize in 2004. He also receives the Axel Hirsch Prize in medicine 2014.

In 2010, Dr. Cao received a distinguished professor award at the Karolinska Institutet. Dr. Cao also received the ERC-advanced research grant award for being the top scientist in Europe. He received an NOVO Nordisk-advanced grant award in 2014. His research interests include molecular mechanisms of pathological angiogenesis that contributes to obesity, metabolic diseases, diabetic complications, cancer, metastasis, and cardiovascular diseases, with emphasis on clinical relevance and translational research. His scientific publications have been cited for more than 15695 times and with an h-index of 65.