UCL INFECTION, IMMUNOLOGY AND INFLAMMATION SYMPOSIUM

Tuesday 8 November 2016
9.00am - 6.00pm
Programme

9.00-9.30am
Registration

9.30-9.35am
Welcome and introduction
Professor Hans Stauss

9.35-10.35am
Session one – Integration of pathogen and human genomic sequencing
Chair: Professor David Abraham

Professor Judith Breuer
Host-pathogen sequencing provides insight into the pathogenesis of varicella zoster virus in skin and neurons

Professor William Wade
The human oral microbiome in health and disease

Professor Harry Hemingway
Big data and electronic health records

10.35-10.40am
Dr Barny Cox
An Introduction to UCLB: Intellectual Property Exploitation and its relevance to UCL’s Infection, Immunology and Inflammation research community

10.40-11.05am
Networking and poster exhibition

11.05am – 12.05pm
Session two – Basic immunology
Chair: Professor Daniel Pennington

Dr Melania Capasso
What voltage-gated proton channels do in normal and malignant B cells

Professor Arne Akbar
The convergence of senescence and nutrient sensing pathways in immunity

Dr Benedict Seddon
Sauces and mixtures - recipes for long term maintenance of CD4 memory

Dran 12.05-1.05pm
Lunch and poster exhibition

1.05-2.20pm
Session three – Early career researcher presentations
Chair: Professor Emma Morris

Dr Deborah Chong
The role of platelet-derived TGFβ in pulmonary fibrosis

Dr Julie Demaret
Alterations of neutrophil functions during sepsis-induced immunosuppression

Dr Neil McCarthy
Human antigen-presenting γδ T-cells promote IL-22 production in naive and intestinal memory CD4+ T-cells in a TNF-α and ICOSL-dependent manner

Dr Madhvi Menon
Abnormal crosstalk between regulatory B cells and plasmacytoid dendritic cells contributes to the pathogenesis of systemic lupus erythematosus

Dr Laura Pallett
Upregulation of nutrient transporters in the metabolic reprogramming of antiviral T cells

Dr Louise Webb
Redundant and non-redundant roles for NF-kB during thymocyte development and maturation of new T cells

2.20-3.20pm
Session four – Immunotherapy
Chair: Professor Federica Marelli-Berg

Dr Claire Booth
T cell gene therapy for XI-linked lymphoproliferative

Dr Claire Roddie
An update on cellular therapies

Professor Adrian Martineau
Vitamin D in the prevention and treatment of respiratory infection

3.20-3.50pm
Networking and poster exhibition

3.50-4.50pm
Session five – Inflammation and tissue repair
Chair: Professor Massimo Pinzani

Dr William Alazawi
Stat2 is a pivotal regulator of inflammation

Dr Helen Lachmann
Late onset CAPS and somatic mosaicism

Dr Simon Yona
Human mononuclear phagocyte kinetics in health and disease

4.50-5.00pm
Early career researcher prize presentation
Professor David Lomas

5.00-5.05pm
Closing remarks
Professor Hans Stauss

5.05-6.00pm
Networking drinks reception
Welcome

It is my pleasure to welcome you all to the annual Infection, Immunology and Inflammation (III) Symposium. This year, we have a record number of participants from UCL, Queen Mary University of London (QMUL) and from other institutions in the UK and abroad. It is exciting to see that this event has gained in popularity over the past years, and that it has evolved to be a major science event in Central London.

I would like to take this opportunity to give a brief history of the event. The first Immunology Symposium was hosted in 2009 when UCLPartners was formed following the successful application for an Academic Health Science Centre. In subsequent years, the scope of the symposium was extended to include research activities in Infection and Inflammation at UCL and partner Institutions. Today, this UCLPartners event is organised and hosted by colleagues at UCL and QMUL, the two largest academic institutions of the partnership.

This year we have a larger venue than in previous years. This has enabled us to accept a larger number of participants and poster displays. It has also enabled us to offer more space for the commercial sponsors of this event. We are very grateful for their financial support that has been critical over the past years to establish the symposium as a major science event with international appeal.

The programme features outstanding contributions from established UCLPartners researchers and also oral presentations from early career researchers selected from the submitted abstracts. There will be prizes for the best poster presentations and for the best talk by an early career researcher.

We are keen to have your feedback and suggestions of what we could do to further improve the quality of the Symposium over the next years. I very much hope that you enjoy the day and please tell your friends and colleagues about this amazing science event.

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Professor Hans Stauss
Chair, UCL III Symposium Organising Committee
Chair, UCLPartners III Theme
Director, UCL Institute of Immunity and Transplantation
Co-Director, UCL Division of Infection and Immunity

Professor Stauss’ research group focusses on the analysis of antigen-specific T lymphocyte responses and the development of immunotherapy for the treatment of cancer, chronic infection and autoimmune conditions. In order to generate therapeutic T cells of desired specificity his group has been amongst the pioneering labs developing TCR gene therapy using conventional and regulatory T cells. His group has developed strategies to improve the expression and function of therapeutic TCR, and they use animal models to test the efficacy in vivo. His interest remains the molecular and cellular analysis of gene engineered T cells in the human system and in mouse models. His group is one of the few in the world to transfer the research concepts into clinical trials. At present they are recruiting patients into two clinical trials testing TCR gene therapy in acute myeloid leukaemia and in stem cell transplantation.

Professor Stauss is also interested in using genetic engineering to regulate the metabolic activity of gene modified T cells, with the goal to either enhance effector T cell differentiation or memory formation in vivo. They use the CRISPR technology to perform targeted gene editing to disrupt genes involved in triggering the exhaustion of therapeutic T cells. Of particular interest for this application is the work of his group developing TCR and CAR gene transfer into regulatory T cells to achieve antigen-specific immune suppression for the treatment for autoimmune conditions.
Symposium Organising Committee

**Professor David Abraham**  
Professor of Cell and Molecular Biology, Head of the UCL Research Department of Inflammation, and Co-Director of the Centre for Rheumatology and Connective Tissue Diseases

**Professor Michael Ehrenstein**  
Professor of Experimental Rheumatology, UCL Division of Medicine

**Professor Federica Marelli-Berg**  
BHF Chair of Cardiovascular Immunology, William Harvey Research Institute, Queen Mary University of London

**Professor Emma Morris**  
Professor of Clinical, Cell and Gene Therapy, UCL Institute of Immunity and Transplantation, and Director, UCLH/UCL NIHR Biomedical Research Centre Inflammation, Immunity & Infection Research Theme

**Dr Mahdad Noursadeghi**  
Senior Lecturer, UCL Division of Infection & Immunity

**Professor Daniel Pennington**  
Professor of Molecular Immunology, Centre Lead for Immunobiology, Blizard Institute, Queen Mary University of London
**Professor Mauro Perretti**  
Professor of Immunopharmacology  
Co-Director, William Harvey Research Institute, Dean for Research and Research Impact, Barts and The London School of Medicine and Dentistry, Queen Mary University of London

**Professor Massimo Pinzani**  
Professor of Medicine, Sheila Sherlock Chair of Hepatology, and Director, UCL Institute for Liver and Digestive Health

**Professor Hans Stauss**  
Chair, UCL III Symposium Organising Committee, Chair, UCLPartners III Theme, Director, UCL Institute of Immunity and Transplantation, and Co-Director, UCL Division of Infection and Immunity

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**Jessica Grant**  
Communications and Events Officer, Research Coordination Office, Office of the Vice-Provost (Health), UCL School of Life and Medical Sciences

**Lalita John**  
Events Assistant, Research Coordination Office, Office of the Vice-Provost (Health), UCL School of Life and Medical Sciences
The UCL Research Domains are large, cross-disciplinary research communities that span UCL and our partner organisations, with the aim of fostering interaction and collaboration. By bringing together a critical mass of expertise, we believe that we can further encourage and support internationally leading research in our key areas of strength.

UCL Research Domains aim to:
- develop new research collaborations and partnerships, within and beyond UCL
- support academic communities in developing strategic ambitions that further develops UCL’s internationally leading research profile
- underpin strategic developments and attract major funding
- provide development opportunities for early career researchers
- exemplify how research communities can become greater than the sum of their parts.

The current UCL Research Domains are: Neuroscience; Personalised Medicine; Populations & Lifelong Health; Environment; eResearch; and Collaborative Social Sciences.

Each UCL Research Domain includes a number of research Themes, which are of strategic importance to the Research Domain and UCL as a whole.

**UCL Personalised Medicine Domain**
The UCL Personalised Medicine Domain harnesses the breadth and depth of the personalised medicine research activity taking place across UCL and its partner hospitals, supporting the delivery of innovative patient-targeted medicines and therapies.

Personalised medicine can be described as providing the right medicine, to the right patient, at the right dose, at the right time. It involves tailoring medical treatment based on the individual’s biological data, needs and preferences throughout all the stages of care, including prevention, diagnosis and treatment.

Our vision is to build upon our existing excellence by supporting and investing in cross-disciplinary research teams, in order to become the world’s leading institution in this area. We plan to exploit UCL’s potential for stratified therapies, leading to the realisation of ‘precision medicine’ and ultimately truly personalised care.

Underpinned by our strategy to align research, education and patient care, we aim to develop and maintain an internationally leading research profile in personalised medicine. In doing so, we are exploiting our growing informatics capacity; genomics and biomics capabilities and collaborations; and health economics perspective.

If you are a member of UCL research staff and would like to join the UCL Personalised Medicine Domain community, simply select the UCL IRIS Personalised Medicine Theme when you complete/update your IRIS profile.

**Infection, Immunology and Inflammation**
The UCL Infection, Immunology and Inflammation (III) Theme sits within the UCL Personalised Medicine Research Domain. The Theme is a major grouping of cross-disciplinary expertise that brings together around 250 group leaders and postdoctoral researchers from across UCL.

By working together, UCL III researchers are increasing our understanding of diseases, such as HIV, TB, malaria, asthma, arthritis, and cancer. This cross-disciplinary culture also provides an excellent training environment for PhD students and postdoctoral scientists.

**UCLPartners’ Academic Health Science Centre (ASHC)**
Through its extensive collaborative NIHR infrastructure and national and international collaborations, UCL and its partner hospitals within UCLPartners’ Academic Health Science Centre (ASHC) has the capacity to drive innovative personalised medicine initiatives. The AHSC creates both depth and breadth of excellence by bringing together a cluster of Higher Education (HE) institutions, including Queen Mary University of London, and NHS Trusts, enabling each to provide specialist expertise in complementary areas.

[www.ucl.ac.uk/research/domains](http://www.ucl.ac.uk/research/domains)
Integration of pathogen and human genomic sequencing

Chair: Professor David Abraham
Professor of Cell and Molecular Biology, Head of the UCL Research Department of Inflammation, and Co-Director of the Centre for Rheumatology and Connective Tissue Diseases

David Abraham gained his PhD at King's College, and then held a fellowship at the Kennedy Institute for Rheumatology in London, followed by a Medical Research Council Travelling Fellowship at Berkeley and the Jackson Laboratory, Maine in the USA. He became a senior scientist in genetics and mammalian development at the Medical Research Council's National Institute for Medical Research in Mill Hill, and then moved to the UCL Division of Medicine in 1997. At UCL he is involved in defining research strategy in the centre and has major research interests in studying tissue repair processes, the pathobiology of scleroderma and the mechanisms underlying inflammatory-driven tissue scarring and fibrosis and the development and use of genetically modified mice as pre-clinical models to study fibrosis pathogenesis and treatment of connective tissue diseases. Collaborations with industrial partners have led to the successful licensing and translation of targets into clinical trials.

Professor Judith Breuer
Co-Director & Professor of Virology, UCL Division of Infection & Immunity, and Consultant Clinical Virologist, Great Ormond Street Hospital

Host-pathogen sequencing provides insight into the pathogenesis of varicella zoster virus in skin and neurons

Judith Breuer is Professor of Virology and Co-Director of the UCL Division of Infection and Immunity and Consultant Clinical Virologist at Great Ormond Street Hospital for Children. Her research interests include pathogen genomics, molecular epidemiology and pathogen genetic determinants of infectious disease. Although primarily interested in the pathogenesis and spread of viral infections, Professor Breuer has recently applied novel technologies to whole genome sequencing of hard-to-grow bacteria such as Mycobacterium tuberculosis and Chlamydia trachomatis directly from clinical samples. Professor Breuer is an expert on vaccines and vaccine preventable diseases, a member of the UK Joint committee on Vaccines and Immunisations and Chair of the subcommittees on Human Papillomavirus and Varicella Zoster virus vaccines.
Integration of pathogen and human genomic sequencing

Professor William Wade
Professor of Oral Microbiology, Blizard Institute, Queen Mary University of London

The human oral microbiome in health and disease

William Wade graduated in Biological Sciences in 1978 from the University of East Anglia. He pursued a PhD in Oral Microbiology at Cardiff Dental School and was appointed to a Lectureship there in 1987. He then moved in 1993 to the University of Bristol to take up a Senior Lectureship in Oral Microbiology, and in 1996 he was appointed Professor of Oral Microbiology at UMDS, now King's College London. Since 2002 he has been an Honorary Senior Research Investigator at the Forsyth Institute, Boston, USA. In 2013 he was appointed Professor of Oral Microbiology at Barts and The London School of Medicine and Dentistry, Queen Mary University of London.

Professor Harry Hemingway
Professor of Clinical Epidemiology, Director, The Farr Institute, London, and Director, UCL Institute of Health Informatics

Big data and electronic health records

Harry is a clinical academic having trained in medicine and public health in Cambridge and London. He directs The Farr Institute of Health Informatics Research in London, part of a wider national Research Institute innovating improvements in health and healthcare using rapidly emerging data opportunities from electronic health records, imaging, omics and wearables. He is principal investigator of the CALIBER (Cardiovascular disease research using Linked Bespoke studies and Electronic Records) programme which is exploiting linked rich, lifelong patient records in primary care and hospital care to better understand health and disease from cradle to grave. One particular research focus has been to use such large scale ‘higher resolution’ studies to understand how risk factors may differ in association across pathologically diverse cardiovascular diseases. Harry leads the UK Biobank Cardiac Outcomes working group, was a Member of the National Institute for Health and Care Excellence (NICE) Guidelines committee on chest pain whose recommendations transformed the investigation of suspected stable angina. He has contributed to the governance and sharing of national registries for research which has directly informed clinical policy.
Basic immunology

**Chair: Professor Daniel Pennington**
Professor of Molecular Immunology, Centre Lead for Immunobiology, Blizard Institute, Queen Mary University of London

Professor Pennington obtained his PhD from the National Institute for Medical Research in north London under the supervision of Dr Elaine Dzierzak, where he studied the interaction of HIV regulatory proteins with the immune system. After spending a year at Yale University School of Medicine with Professor Richard Flavell, he moved to the lab of Dr Mike Owen at Cancer Research UK, London, where he commenced his studies on T cell development. Professor Pennington moved to the Blizard Institute, Barts and The London School of Medicine and Dentistry (Queen Mary University of London) from Professor Adrian Hayday’s Department of Immunobiology at Guy’s King’s and St. Thomas’ School of Medicine (Guy’s Hospital), where his work focused on the development of gamma/delta T cells. Professor Pennington’s laboratory now works on various aspects of thymic T cell development, primarily focusing on the generation of unconventional T cell subsets.

**Dr Melania Capasso**
Senior Lecturer, Barts Cancer Institute, Queen Mary University of London

*What voltage-gated proton channels do in normal and malignant B cells*

Dr Melania Capasso graduated in Medicinal Chemistry from the University of Naples, Italy and then moved to the UK during her PhD studies. She held postdoctoral positions in Nottingham and Leicester before starting her independent career at Barts Cancer Institute, Queen Mary University of London in 2010. She was awarded a Bennett Fellowship from Bloodwise (previously Leukaemia and Lymphoma Research) in 2012 and has additional funding from Biotechnology and Biological Sciences Research Council (BBSRC) / GSK (GlaxoSmithKline), Pancreatic Cancer Research Fund, Dunhill Medical Trust and Willoughby Fund for Inflammatory Research.

Her research interests are in mechanisms regulating immune cell activation, with a special interest in how voltage-gated proton channels regulate immune cell function. She has authored several publications in journals such as *Proceedings of the National Academy of Sciences, Nature Immunology, Blood, and Clinical Cancer Research.*
Basic immunology

**Professor Arne Akbar**
Professor of Immunology and Head of the Immunosenescence Research Group, UCL Division of Infection & Immunity

*The convergence of senescence and nutrient sensing pathways in immunity*

Professor Akbar's research has focussed on the understanding of T cell dysfunction, in particular immune dysregulation associated with chronic viral antigenic stress and ageing. His work on T cell differentiation has led to new insights into the mechanisms that regulate changes in the immune system in older humans. His research group has identified a concrete link between ageing, nutrient sensing pathways and the efficiency of the immune system in older humans. Professor Akbar has a wide national and international collaborative network, with universities and research organisations in Europe, the United States and Singapore.

**Dr Benedict Seddon**
Reader in Immunology, UCL Institute of Immunity and Transplantation

*Sauces and mixtures - recipes for long term maintenance of CD4 memory*

Dr Seddon studied for his PhD with Dr Don Mason at Path Dept, Oxford University (1993-98), investigating the role of regulatory T cells in prevention of autoimmune diabetes and thyroiditis. He continued his training with Dr Rose Zamoyska at the Medical Research Council (MRC) National Institute for Medical Research in Mill Hill, London, investigating the role of Src family kinases in T cell development and homeostasis. After five years with Rose, Dr Seddon started his independent group in 2003, focusing on the role of TCR and cytokine signals in regulating T cell homeostasis, in the Division of Immune Cell Biology at Mill Hill. In 2013 he moved to UCL to the newly formed Institute of Immunity and Transplantation.
Early career researcher presentations

**Chair: Professor Emma Morris** - Professor of Clinical, Cell and Gene Therapy, UCL Institute of Immunity and Transplantation, and Director, UCLH/UCL NIHR Biomedical Research Centre Inflammation, Immunity & Infection Research Theme

Emma trained in Medicine at the University of Cambridge graduating in 1992, with the University's George Peter Baker Prize. Following qualification she completed general medical and haematology specialty training in London (The Royal London Hospital, Guy's Hospital and St Bartholomew's Hospital). She moved back to Cambridge with a Wellcome Trust Clinical Research Training Fellowship to undertake a PhD in haematopoietic stem cell biology in the Department of Haematology, which was awarded in 2000. Emma then undertook further sub-speciality clinical training at University College London Hospitals and Great Ormond Street Hospital focusing on allogeneic stem cell transplantation for haematological malignancies.

In 2002 she was awarded the LLR Senior Bennett Fellowship in Experimental Haematology and established her own Research Group, working alongside Professor Hans Stauss. Her lab is funded by Leukaemia and Lymphoma Research (now Bloodwise), the Medical Research Council and Cancer Research UK, amongst others.

Her research team is developing novel gene and cell therapies for the treatment of haematological malignancies. Her research spans from animal models to in vitro experimental immunology to Phase I ‘first time in man’ clinical studies. These studies involve the testing of genetically modified immune cells and stem cells in patients with haematological malignancies (blood cancers) or inherited immune deficiencies. Clinically, she is leading the development of a national programme in Allo HSCT for adults with primary immunodeficiency.

She is Director of the NIHR UCLH/UCL Biomedical Research Centre Inflammation, Infection and Immunity (III) and the Gene, Cell and Regenerative Therapies Research Themes, Lead of the UCL Experimental Cancer Medicine Centre Immunotherapy Theme, Chair of the UCL Gene Therapy Safety Committee for Clinical Trials and previously on the Board of the British Society for Blood and Marrow Transplantation and the British Society for Gene and Cell Therapy.

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**Dr Deborah Chong** - Research Associate, Centre for Inflammation & Tissue Repair, UCL Division of Medicine

**The role of platelet-derived TGFβ in pulmonary fibrosis**

**Authors:** Chong DLW, Rebeyrol C, Khawaja A, Forty EJ, Kanda N, Scotton CJ, Porter JC

Background: Pulmonary Fibrosis (PF) is characterised by abnormal wound healing involving fibroblast proliferation and increased collagen deposition. TGFβ is an important mediator in fibrosis; however its source in PF is ill-defined. Platelets can release large amounts of TGFβ although their role in PF is unknown.

Hypothesis: We propose that release of platelet-derived TGFβ contributes to aberrant wound healing in PF.

Methods: Using a double-transgenic mouse with megakaryocytic-specific deletion of TGFβ, lung fibrosis was induced in knockout (KO) and wildtype (WT) animals by oropharyngeal bleomycin administration. Lung tissue was investigated at 6, 21 or 28 days post-bleomycin. In vitro chemotaxis assays were performed to investigate the effects of platelet-derived TGFβ.

Results: In vitro: Platelet-derived TGFβ is a potent neutrophil chemoattractant with maximal effect at 1ng/ml. In vivo: 6 days after bleomycin treatment, there was no significant difference in cellular recruitment in the lungs between WT and KO animals. At 21 days post-bleomycin, lungs developed large fibrotic lesions when examined by micro-CT. Bleomycin-treated KO mice exhibited an attenuated fibrotic response compared with WT animals (24.3 vs. 19.5%), although not reaching statistical significance (p=0.4). During the wound
resolution phase at 28 days post treatment, the degree of fibrosis between WT and KO animals was similar (9.56 vs. 9.84%, p=0.8).

Conclusion: Our data suggest that despite being a potent neutrophil chemoattractant in vitro, platelet-derived TGFβ in vivo is not a major driving force during the inflammatory or resolution phases of our PF animal model, but may contribute to the development of fibrotic disease.

Dr Julie Demaret - Post doctorate research associate, Centre for Immunobiology, Blizard Institute, Queen Mary University of London

Alterations of neutrophil functions during sepsis-induced immunosuppression

Authors: Demaret J, Venet F, Textoris J, Friggeri A, Lepape A, Monneret G

Introduction: Sepsis represents the major cause of death among critically ill patients worldwide. Septic syndromes deeply perturb immune homeostasis and impair innate and adaptive immunity. Intensity and duration of immunosuppression are associated with increased mortality and nosocomial infections rate (1). While neutrophils represent the first line of defense against infection, little is known about their phenotype and functions during sepsis-induced immunosuppression. Meanwhile, an immunosuppressive neutrophil subset has been recently reported in the blood of volunteers challenged with lipopolysaccharide (2).

Objective: The objective of this study was to perform for the first time a global evaluation of neutrophil alterations in immunosuppressed septic patients based on phenotypic, functional and transcriptomic studies. In addition, the potential association of these parameters and deleterious outcomes was assessed.

Patients and Methods: Peripheral blood was collected from 43 septic shock patients presenting with features of sepsis-induced immunosuppression (low monocyte HLA-DR, lymphopenia, increased % of regulatory T cells) and compared to 23 healthy controls. Neutrophil expressions of different extra and intra-cellular markers were measured by flow cytometry and functional studies such as oxidative burst, phagocytosis, chemotaxis and activation were performed. Cellular morphology was evaluated by microscopy after sorting. Transcriptomic analyses were also performed.

Results: Our results highlight a markedly altered neutrophil chemotaxis and oxidative burst responses and an increased number of circulating immature granulocytes in patients. Importantly, both aspects were associated with an increased risk of death after septic shock. Interestingly, phagocytosis and activation capacities were conserved.

Conclusion: Our results show that circulating neutrophils present with phenotypic, functional and morphological alterations during sepsis-induced immunosuppression. These alterations potentially affecting recruitment to the site of infection and ability to produce bactericidal agents of neutrophils may participate in the deleterious role of immunosuppression after septic shock. These results need to be confirmed in a larger study and in animal models recapitulating these alterations and the contribution of each neutrophil subset to these changes now deserves to be investigated.

Early career researcher presentations

**Dr Neil McCarthy** - Post-doctoral research scientist, Centre for Immunobiology, Blizard Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London

*Human antigen-presenting γδ T-cells promote IL-22 production in naïve and intestinal memory CD4+ T-cells in a TNF-α and ICOSL-dependent manner*

Authors: McCarthy NE, Tyler CJ, Lindsay JO, Stagg AJ, Moser B, Eberl M

Epithelial barrier protection by local polarised T-cells plays a crucial role in tissue homeostasis and host defence against microbial infection and chronic inflammation. We report that microbe-responsive γδ T-cells in human blood, colon and ileum display features of antigen-presenting cells (APCs), efficiently polarise CD4+ T-cells towards distinct effector fates, and employ a novel co-stimulatory pathway to induce IL-22 but not IL-17 in human CD4+ T-cells. γδ T-APC function was induced by microenvironmental cues including IL-15, which conferred potent ability to induce IL-22 in both naïve and effector/memory CD4+ T-cells from blood and colon via a mechanism that required TNF-α and ICOSL but not IL-6. Accordingly, activation of γδ T-cells in human intestinal tissue enhanced IL-22 secretion and promoted TNF-α/ICOSL-dependent release of the IL-22-inducible antimicrobial protein calprotectin. Our findings demonstrate that human microbe-responsive γδ T-APC induce key mediators of mucosal barrier protection and identify promising candidates for gut-directed immunotherapies and vaccines.

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**Dr Madhvi Menon** - Postdoctoral Research Associate, UCL Division of Medicine

*Abnormal crosstalk between regulatory B cells and plasmacytoid dendritic cells contributes to the pathogenesis of systemic lupus erythematosus*

Authors: Menon M, Isenberg DA, Mauri C

Systemic lupus erythematosus (SLE) is an autoimmune disease characterized by heterogeneous cellular abnormalities contributing to the disease pathogenesis. Chronic activation of toll-like receptors in patients with SLE, results in overproduction of interferon alpha (IFNα) by hyperactivated plasmacytoid dendritic cells (pDCs) that contributes to inflammation. In addition, regulatory B cells (Bregs), which are important contributors to the maintenance of tolerance, have been previously reported to be defective in patients with SLE. In this study, we investigate the outcome of interaction between pDCs and Bregs in healthy individuals and patients with SLE.

Here, we identify the existence of a novel feedback loop between pDCs and Bregs. In healthy individuals, pDCs drive the differentiation of B cells into IL-10-producing Bregs and plasmablasts, via the release of IFNα and CD40 engagement. Bregs, in turn, restrain IFNα production by pDCs via IL-10 release. In patients with SLE, we report that this crosstalk is compromised; pDCs promote plasmablast differentiation but fail to expand Bregs. Of interest, this defect was recapitulated in healthy B cells upon exposure to a high concentration of IFNα. Defective pDC-mediated expansion of Bregs in SLE patients was associated with altered STAT1 and STAT3 activation, signals downstream of IFNα/β-receptor. Both altered pDC-Breg interaction and STAT1/STAT3 activation, were normalized in SLE patients responding to B cell depletion (rituximab) therapy.

We propose that alteration in the pDC-Breg interaction contributes to the pathogenesis of SLE.
Early career researcher presentations

Dr Laura Pallett - Postdoctoral Research Associate, UCL Division of Infection & Immunity

*Upregulation of nutrient transporters in the metabolic reprogramming of antiviral T cells*


T cells need to undergo profound metabolic changes to meet the increased energy demands of maintaining an antiviral response. We have previously reported a setting where in vivo L-arginine starvation contributes to antiviral T cell dysfunction, attributed to an expanded population of granulocytic myeloid-derived suppressor cells (Pallett LJ et al. Nat Med 2015). We hypothesised that compensatory changes in nutrient transporter expression provides a mechanism to recalibrate the antiviral T cell response in the face of nutrient starvation. We addressed this using 16-colour flow cytometry of the CD8+ T cells deprived of nutrients in vivo and/or in vitro. The potential for amino acid uptake through the system-L family of amino acid transporters can be determined by extracellular CD98 expression. Ex vivo staining revealed increased CD98 expression on CD8+ T cells in patients with chronic HBV infection, in whom L-arginine is limited in vivo. We also found that CD98 was upregulated on T cells infiltrating the liver; the site of viral infection and pathology. Moreover, HBV-specific CD8+ T cells that encounter their antigen in the liver microenvironment, had increased CD98 expression when compared to T cells of control specificities. The capacity for nutrient starvation to drive an upregulation of specific transporters was confirmed by L-arginine withdrawal in vitro, stimulating an increase in amino acid uptake through the system-L transporter, and further increases in other nutrient transporters, including CD71 (transferrin uptake) and Glut1 (glucose uptake). Reduced extracellular L-arginine or oxygen (both limiting factors in the liver microenvironment) also resulted in an altered mTOR/AMPK activation balance within the T cells that we show are capable of metabolic reprogramming. In summary human T cells respond to limiting supplies of nutrients in their microenvironment by upregulating a key nutrient transporters, highlighting a novel pathway of compensatory metabolic reprogramming.

Dr Louise Webb - Research Associate, Institute of Immunity and Transplantation, UCL Division of Infection & Immunity

*Redundant and non-redundant roles for NF-kB during thymocyte development and maturation of new T cells*

Authors: Webb LV, Ley SC, Seddon B

The NF-kB family of transcription factors critically regulates survival, differentiation and function of immune cells. Canonical NF-kB signalling is mediated by dimers of RelA, cRel and p50 Rel family members and activity of these NF-kB dimers is under positive regulation by the Inhibitor of Kappa B Kinase (IKK) complex. Our previous studies reveal that without IKK activity, thymic development is arrested (Webb et al, 2016). Loss of IKK blocks all NF-kB activation. In this study, we wished to identify distinct/overlapping functions of different NF-kB dimers during T cell development/maturation. We therefore analysed single and compound Rel member knockouts using combinations of CD4Cre Relafx/fx, Rel-/- (lacking cRel) and Nfkb1-/- (lacking p50) mice. While single knockouts of RelA and p50 looked essentially normal, double knockouts exhibited a (~65%) reduction of naïve T cells and reduced regulatory T cell development. In contrast, mice lacking both cRel and p50 had near normal naïve cell numbers, but only ~20% of normal regulatory T cell numbers. Strikingly, mice lacking all three of RelA, cRel and p50 had the most dramatic loss of naïve T cells and no regulatory T cells. IL7R signalling is critical for naïve T cell survival and we have previously identified Il7r as a novel NF-kB target during development. Interestingly, naïve T cell numbers in different strains correlated with the level of IL-7Rα induction during development. These data reveal that development of naïve and regulatory T cells is differentially regulated by RelA/p50 and cRel/p50 NF-kB dimers, but that there exists limited redundancy.
Federica Marelli-Berg qualified in Medicine and Surgery at the University of Milan in 1989, and specialised in Hematology in 1993 at the University of Pavia, Italy.

In 1997 she completed her PhD studies at the Royal Postgraduate Medical School (London) under the supervision of Professor R. Lechler. In 2000 she was awarded a Governors’ lectureship by Imperial College London, where she continued her academic career to become Professor of Immunology in 2011. She joined the William Harvey Research Institute (Barts and The London School of Medicine and Dentistry, Queen Mary University of London) in November 2011. In 2016, she was awarded the BHF Chair of Cardiovascular Immunology.

Dr Claire Booth
Wellcome Trust Early Postdoctoral Research Fellow/Honorary Consultant in Paediatric Immunology, UCL Great Ormond Street Institute of Child Health

T cell gene therapy for X-linked lymphoproliferative disease (XLP)

Claire is a Clinical Lecturer at the UCL Great Ormond Street Institute of Child Health and Honorary Consultant in Paediatric Immunology and Gene Therapy at Great Ormond Street Hospital, London. She graduated from Guy’s, King’s and St. Thomas’ School of Medicine in 2001 and then trained in Paediatrics, subspecialising in Paediatric Immunology and Immunodeficiency. She undertook a PhD in Professor Bobby Gaspar’s lab developing haematopoietic stem cell gene therapy to treat XLP.

She now works as a clinical academic involved in an expanding number of gene therapy clinical trials at Great Ormond Street Hospital which treats patients with immune deficiencies and haematological disorders. Her pre-clinical research focuses on the development of gene therapy strategies to treat XLP-1 and XIAP deficiency using a conventional lentiviral mediated corrective strategy alongside exploration of novel gene editing techniques to facilitate targeted gene addition in both haematopoietic stem cells and T cells.
Immunotherapy

**Professor Adrian Martineau**
Professor of Respiratory Infection and Immunity, Queen Mary University of London

*Vitamin D in the prevention and treatment of respiratory infection*

Adrian Martineau is Clinical Professor of Respiratory Infection and Immunity at Barts and the London School of Medicine and Dentistry, Queen Mary University of London. He is a respiratory physician with a research interest in the effects of vitamin D on human health. His work combines laboratory investigation of the effects of vitamin D on the immune system with a series of multi-centre clinical trials conducted in the UK, South Africa and Mongolia, investigating the potential for vitamin D supplementation to prevent and treat tuberculosis, acute respiratory infections and exacerbations of asthma and chronic obstructive pulmonary disease (COPD). Adrian’s work is funded by the Medical Research Council (MRC), the National Institute for Health Research (NIHR), the Wellcome Trust and the US National Institutes of Health among others; he is Principal Investigator for the MRC-funded ViDiKids Study, a n=5,400 randomised controlled trial of vitamin D supplementation to prevent tuberculosis in Cape Town primary schoolchildren. He also sits on the National Institute for Health and Care Excellence (NICE) Public Health Advisory Committee on implementation of measures to eliminate profound vitamin D deficiency in the UK population.

**Dr Claire Roddie**
Clinician Scientist, Research Department of Haematology, UCL Cancer Institute

*An update on cellular therapies*

Claire is a Clinician Scientist and Honorary Consultant Haematologist working in the laboratory of Dr Martin Pule. She has a particular interest in Chimeric Antigen Receptor (CAR) T-cells for haematological malignancy and her role involves preclinical development of novel CAR projects and clinical trial design for the UCL CAR T cell programme.
Inflammation and tissue repair

Chair: Professor Massimo Pinzani
Professor of Medicine, Sheila Sherlock
Chair of Hepatology, and Director, UCL
Institute for Liver and Digestive Health

Massimo Pinzani is a pioneer in the area of liver inflammation and fibrogenesis with key contributions on the cellular and molecular biology mechanisms and the development of non-invasive methods for the evaluation of disease progression including the development of serum biomarkers. Professor Pinzani’s current activity is mainly focused on regenerative Hepatology and bioengineering. Professor Pinzani has served in the governing and scientific boards of major international organisation in the area of Hepatology and Gastroenterology, and as Associate Editor of top peer reviewed international journals.

Dr William Alazawi
Reader & Consultant in Hepatology, Centre for Immunobiology, Blizard Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London

Stat2 is a pivotal regulator of inflammation

William Alazawi qualified from the Cambridge MB/PhD programme, having completed doctorate research at the Medical Research Council (MRC) Cancer Cell Unit with Nicholas Coleman. He conducted his postgraduate training at Addenbrooke’s Hammersmith, King’s College and Royal London Hospitals. He joined Graham Foster’s lab as a postdoctoral fellow in 2009 (latterly National Institute for Health Research (NIHR) clinical Lecturer). In 2013, Will set up his own group and won the Physician Scientist Award of the European Association for the Study of the Liver. He holds an MRC New Investigator Research Grant as well as grants from Liver and Pancreas Research UK and the Diabetes Research and Wellness Foundation. Will is a reviewer for leading journals, international meetings and funders (MRC and NIHR). The Alazawi group takes a translational approach to inflammatory liver and pancreatic disease, using its laboratory expertise in mouse and human immunology to answer critical clinical questions that are relevant to patient care.
Inflammation and tissue repair

Dr Helen Lachmann
Reader, National Amyloidosis Centre, UCL Division of Medicine

*Late onset CAPS and somatic mosaicism*

Dr Helen Lachmann specialises in amyloidosis and the autoinflammatory diseases. She has published widely and her main scientific interests are focused on the phenotypic characterisation and treatment of acquired and hereditary forms of systemic amyloidosis and the genetics and management of the inherited systemic autoinflammatory conditions.

Dr Simon Yona
Senior Research Associate, UCL Division of Medicine

*Human mononuclear phagocyte kinetics in health and disease*

Simon performed his PhD under the direction of Professor Rod Flower FRS and Professor Mauro Perretti at St. Bartholomew’s Hospital (University of London). After completing his PhD, he joined the laboratory of Professor Siamon Gordon FRS at the Sir William Dunn School of Pathology (University of Oxford), studying adhesion-GPCRs in the context of macrophage and neutrophil signaling. In 2008, Simon received a Federation of European Biochemical Societies (FEBS) Fellowship to work with Professor Steffen Jung at the Weizmann Institute of Science. His studies there focused on generating transgenic mice to manipulate and fate map the mononuclear phagocyte system. To this end, he revealed the ontogeny and dynamics of macrophages and monocytes under steady state and inflammation. He returned to the United Kingdom and joined the UCL Division of Medicine. Work in his lab aims at understanding human mononuclear phagocyte biology, specifically, the developmental profile and distinct functions of monocytes and monocyte-derived cells.
Poster judging committee

Dr Katiuscia Bianchi  
Lecturer in Molecular Oncology, Centre for Molecular Oncology, Barts Cancer Institute, Queen Mary University of London

Dr David Coe  
Post Doc, Department of Biochemical Pharmacology, William Harvey Research Institute, Queen Mary University of London

Dr Dianne Cooper  
Lecturer, Centre for Biochemical Pharmacology, William Harvey Research Institute, Queen Mary University of London

Dr Ian Giles  
Reader/Consultant in Rheumatology, Centre for Rheumatology Research, UCL Division of Medicine

Professor Ravi Gupta (Chair)  
Wellcome Trust Senior Research Fellow, UCL, Honorary Consultant Infectious Diseases, UCLH

Dr Ana O'Loghlen  
Non-clinical Lecturer, Centre for Genomics and Child Health, Blizard Institute, Queen Mary University of London

Dr Paula Longhi  
Early Career Researcher, William Harvey Research Institute, Queen Mary University of London

Dr Claudio Mauro  
Senior Lecturer in Molecular Immunology and BHF Intermediate Research Fellow, William Harvey Research Institute, Queen Mary University of London

Dr Jill Norman  
Centre for Nephrology, UCL Division of Medicine

Dr Krista Rombouts  
Professorial Research Associate, Regenerative Medicine & Fibrosis Group, UCL Institute for Liver and Digestive Health

Dr Andrew Williams  
Senior Research Associate, UCL Division of Medicine

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Prize-giving

**Professor David Lomas** - UCL Vice-Provost (Health), UCL School of Life & Medical Sciences

*Early career researcher prize presentation*

David Lomas is Vice-Provost (Health), Head of UCL School of Life and Medical Sciences and Head of UCL Medical School. He is the Academic Director of the UCLPartners Academic Health Sciences Centre and a non-executive director at UCLH. David is an NIHR Senior Investigator and works as a respiratory physician at UCLH and the Royal Free Hospital. His research focuses on antitrypsin deficiency, the serpinopathies and COPD.

David received his medical degree from the University of Nottingham and undertook his PhD at Trinity College, University of Cambridge. He was an MRC Clinician Scientist, University Lecturer and Professor of Respiratory Biology in Cambridge before moving to UCL in 2013 to be Chair of Medicine and Dean of the Faculty of Medical Sciences. He was the past Chair of the Population and Systems Medicines Board at the Medical Research Council and previously chaired the Respiratory Therapy Area Unit Board at GlaxoSmithKline.
Poster exhibitors

Drama Studio

1. **Dr Marwh Aldriwesh**  
   PhD Student, Department of Infection, Immunity and Inflammation, School of Medicine, University of Leicester  
   *Risk factors for the development of infectious peritonitis in peritoneal dialysis patients*  
   Authors: Aldriwesh M, Barratt J, Freestone P

2. **Ahdab AlSaieedi**  
   PhD Student, Institute of Immunity and Transplantation, UCL Division of Infection & Immunity  
   *Manipulation of cytokines production: a strategy to enhance cancer immunotherapy*  
   Authors: AlSaieedi A, Holler A, Bendle G, Stauss H

3. **Dr Samantha Alvarez-Madrazo**  
   Research Associate, Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, and Farr Institute of Health Informatics Research, University College London  
   *Adherence and persistence to anticytokine therapy in patients with rheumatoid arthritis in Scotland*  

4. **Ponni Balasundaram**  
   UCL graduate, Centre for Clinical Pharmacology, UCL Division of Medicine  
   *Validation of novel markers of human macrophage polarization with relevance to atherosclerosis*  
   Authors: Balasundaram P, Mudalige NL, Waddington K, Pineda-Torra I, Sofat R

5. **Dr Alessandro Barbarulo**  
   Research Associate, Department of Immunology, UCL Institute of Immunity and Transplantation  
   *The role of NF-κB signaling in T cell development and maturation*  
   Authors: Barbarulo A, Webb L, Seddon B

6. **Dr Ruth Blackburn**  
   Research Associate in Epidemiology and Statistics, Department of Infection & Population Health, UCL Farr Institute of Health Informatics Research  
   *Laboratory-confirmed respiratory infections as predictors of hospital admission for myocardial infarction: time-series analysis of English data for 2004-2015*  
   Authors: Blackburn RM, Pebody R, Hayward A, Warren-Gash C

7. **Dr Najlae Boukbir**  
   PhD Student, Centre for Clinical and Diagnostic Oral Sciences, Institute of Dentistry, Queen Mary University of London  
   *Expression of homing makers on peripheral blood lymphocytes in Behçet’s Disease patients and healthy controls*  
   Authors: Boukbir N, Bergmeier L, Hasan S, Fortune F
8. **Dr Romain Colas**  
Post Doctoral Fellow, Lipid Mediator Unit, William Harvey Research Institute, Queen Mary University of London  
*Identification and actions of the maresin 1 metabolome in infectious inflammation*  
Authors: Colas RA, Dalli J, Chiang N, Serhan CN

9. **Dr Shanthini M Crusz**  
Clinical Research Fellow, Centre for Stem Cells in Cancer & Ageing, Barts Cancer Institute, Queen Mary University of London  
*Macrophage derived oncostatin M driving pancreatic ductal adenocarcinoma invasion*  
Authors: Crusz SM, Trabulo SM, Reixach L, Palfreeman A, Heeschen C

10. **Salvatore D’Agate**  
PhD Student, Clinical Pharmacology and Therapeutics Group, UCL  
*Impact of disease on drug exposure and dosing recommendation for amoxicillin in neonatal sepsis.*  
Authors: D’Agate S, Della Pasqua O

11. **Sara De Jesus**  
PhD Student, Faculty of Biosciences, University of Kent  
*The role of the sRNA MicA in the Post-transcriptional thermoregulation of Outer membrane proteins*  
Authors: De Jesus S

12. **Anaelle Dumas**  
PhD Student, Centre of Cancer and Inflammation, Barts Cancer Institute, Queen Mary University of London  
*Regulation of Inflammatory Pathways in Microglia, the Innate Immune Cells of the Brain*  
Authors: Dumas A, Capasso M

13. **Natalie Edner**  
PhD Student, Institute of Immunity & Transplantation, UCL Division of Infection & Immunity  
*Follicular helper T cell differentiation in autoimmune diabetes: Role of the CD28 pathway*  
Authors: Edner NM, Wang CJ, Heuts F, Kogimtzis A, Ovcinnikovs V, Petersone L, Ross EM, Ntavli E, Walker LSK

14. **George Elias**  
PhD Student, Laboratory of Experimental Hematology (LEH), Vaccine and Infectious Disease Institute (VAXINFECTIO), University of Antwerp  
*The effects of cytomegalovirus seropositivity and frequent infectious challenges on T-cell differentiation and interferon-responses against varicella-zoster virus*  
15. **Dr Marc George**  
Wellcome Trust Research Fellow and SpR in Clinical Pharmacology, Department of Clinical Pharmacology, UCL Division of Medicine  
**A Flow Cytometric Method for Studying Innate Immune Cells in the Rat Heart after Myocardial Infarction and Ischaemia Reperfusion Injury**  
Authors: George MJ, Taylor V, Stuckey D, Hingorani A, Gilroy DW

16. **Dr Rose Gilbert**  
Clinical/PhD Research Fellow and Teaching Associate, Ocular Immunology, UCL Institute of Ophthalmology  
**TIGIT+ T-regs: Potential Biomarkers For Clinical Remission Of Sight-Threatening Uveitis?**  

17. **Dr Michelle Goulart**  
Postdoctoral Research Fellow in Cancer Immunology, Veterinary Clinical Sciences and Services, Royal Veterinary College  
**Myeloid-derived suppressor cells are expanded in the peripheral blood of dogs with a variety of cancers and correlate with tumour burden**  

18. **Dr Thea Hogan**  
Postdoc, Institute of Immunity and Transplantation, UCL Division of Infection & Immunity  
**CD4 memory T cells in mice are kinetically heterogeneous and constitutively replenished from the naive T cell pool at high levels throughout life**  
Authors: Hogan T, Gossel G, Cownden D, Seddon B, Yates A

19. **Dr Christopher Holland**  
Post-doctoral research associate, Centre for Immunobiology, Blizard Institute, Queen Mary University of London  
**Identification of variation in cytotoxic potential of tumour-reactive Vδ2(+) T-cells among a healthy cohort**  
Authors: Holland CJ, Ryan P, Sumaria N, Pennington DJ

20. **Dr Tiezheng Hou**  
Research Fellow, Department of Immunology, Institute of Immunity and Transplantation, UCL Division of Infection & Immunity  
**Analysing CTLA-4 deficiency in patients with Common Variable Immunodeficiency (CVID)**  

21. **Daniel Janman**  
PhD Student, UCL Institute of Immunity and Transplantation, UCL Division of Infection & Immunity  
**Understanding the pathways that control intracellular trafficking of CTLA-4**  
Authors: Janman D, Kennedy A, Qureshi O, Minogue S, Sansom D
22. **Dr Anjum B Khan**  
Clinical Research Fellow, UCL Institute of Immunity and Transplantation,  
*Targeting therapeutic T-cells to the bone marrow niche.*  

23. **Dr Frank Kloprogge**  
Research Associate, Clinical Pharmacology and Therapeutics group, UCL School of Pharmacy  
*Dose selection for fixed dose combinations to treat infectious diseases*  
Authors: Kloprogge F, Hammond R, Gillespie S, Della Pasqua O

24. **Dr Tara Krishnan**  
Honorary Research Associate, Prenatal Cell and Gene Therapy Group, UCL Institute for Women's Health  
*Neurodevelopmental effects of maternal uterine artery AdVEGF-A165 treatment for fetal growth restriction in fetal guinea pigs at term*  
Authors: Krishnan T, Vaughan OR, Hristova M, Rossi CA, David AL

25. **Yang Li**  
PhD Student, Department of Infection, Immunity & Cardiovascular Disease, Medical School, University of Sheffield  
*TMEM203 is a novel regulator of STING-dependent innate immune signalling*  
Authors: Li Y, Kiss-Toth E, Wilson H

26. **Dr Alexander Maini**  
PhD Student, Centre for Clinical Pharmacology, UCL Division of Medicine  
*A Comparison of Human Neutrophils Acquired from Four Experimental Models of Inflammation*  
Authors: Maini A, George M, Motwani M, Day R, Gilroy D, O'Brien A

27. **Ben K Margetts**  
PhD Student, UCL CoMPEX (Centre for Mathematics, Physics and Engineering in the Life Sciences and Experimental Biology) and UCL Great Ormond Street Institute of Child Health Infection, Immunity, Inflammation Programme,  
*Modelling cytomegalovirus infections in immunocompromised children*  
Authors: Margetts BK, Standing J, Breuer J, Klein N

28. **Erni Marlina**  
Research Student, Microbial Disease, UCL Eastman Dental Institute  
*The immunological effects of the probiotic VSL#3*  
Authors: Smith A, Jones BD, Evans K., Marlina E, Fedele S, Smith MA
29. **Dr Thomas McDonnell**  
Post Doctoral Researcher, Rheumatology, UCL Division of Medicine  
*PEGylated Domain I of beta-2-glycoprotein I has the ability to inhibit patient samples in ELISAs, functional assays and in vivo.*  

30. **Matthew J Murray**  
PhD Student, UCL Division of Infection & Immunity,  
*Defining the antiviral activity of a chloride ion channel inhibitor on human cytomegalovirus*  
Authors: Murray MJ, Ayeni T, Panchalingam J, Reeves MB

31. **Kristine Oleinika**  
PhD Student, Division of Infection & Immunity, UCL  
*CD1d is critical for the effector function of regulatory B cells*  
Authors: Oleinika K, Rosser EC, Nistala K, Bosma A, Drozdov I, Mauri C

32. **Vitalijs Ovcinnikovs**  
PhD Student, Institute of Immunity and Transplantation, UCL Division of Infection & Immunity  
*CTLA-4-mediated trans-endocytosis of CD80 and CD86 in control of T cell activation.*  

33. **Lina Petersone**  
Mphil / PhD student, Institute of Immunity and Transplantation, UCL Division of Infection & Immunity  
*Contribution of IL-21 signalling to the phenotype of CTLA-4 deficient mice.*  
Authors: Petersone L, Wang CJ, Heuts F, Kogimtzis A, Ovcinnikovs V, Edner NM, Ross EM, Ntavli E, Walker LSK

34. **Dr David Richards**  
Research Fellow, Centre for Biomedical Modelling and Analysis, Exeter University  
*Engulfment during phagocytosis: combining modelling and experiment*  
Authors: Richards DM

35. **Dr Joanna Shepherd**  
Trauma Research Fellow, Centre for Trauma Sciences, Blizard Institute, Queen Mary University of London  
*Natural killer cells following major trauma: a role in multiple organ dysfunction syndrome?*  
Authors: Shepherd JM, Pennington D, Brohi K, Torrance H, Manson J

36. **Dr Natalie Suff**  
PhD Student, Gene Transfer and Technology Group, UCL Institute for Women's Health  
*A light-producing mouse model of Infection-related Preterm Birth (PTB)*  
Authors: Suff N, Karda R, Perocheau D, Bajaj-Elliott M, Tangney M, Buckley SMK, Waddington SN, Peebles D
37. **Nicolyn Thompson**  
PhD Student, Department of Rheumatology, UCL Division of Medicine  
*Differential peripheral B-cell phenotype in patients with primary Sjögren's syndrome compared to secondary Sjögren's syndrome associated with systemic lupus erythematosus (SLE)*  
Authors: Thompson, N

38. **Kirsty Waddington**  
PhD Student, Centre for Clinical Pharmacology / Centre for Rheumatology, UCL Division of Medicine  
*Liver-X-Receptor stimulation modulates plasma membrane lipid composition and immune function of human CD4+ T cells*  
Authors: Waddington KE, McDonald GM, Robinson G, Deepak S, Pineda-Torra I, Jury EC

39. **Ying Wu**  
PhD Student, Immune Regulation Laboratory, Department of Clinical Sciences and Services, Royal Veterinary College  
*Phenotypic, transcriptomic and functional characterisation of canine regulatory T cells*  

40. **Dr Jie Yang**  
Postdoc, Institute of Immunity and Transplantation, UCL Division of Infection & Immunity  
*IL-7 dependent maintenance of ILC3s is required for entry of lymphocytes into lymph nodes*  
Authors: Yang J, Cupedo T, Coles M, Seddon B

41. **Dr Sylviane Yoba**  
Research Assistant, Centre of Experimental Medicine, School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast  
*Klebsiella pneumoniae blocks autophagy*  
Authors: Yoba S

42. **Professor Yuejuan Zheng**  
Associate Professor, Department of Immunology and Microbiology, Shanghai University of Traditional Chinese Medicine, China, and MRC Human Immunology Unit, Weatherall Institute of Molecular Medicine, Nuffield Department of Medicine, University of Oxford,  
*Micelleilode provides protection of mice against Staphylococcus aureus and MRSA infection by down-regulating inflammatory response*  
Authors: Zheng Y
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**UCL Translational Research Office** (TRO) has a proven track record in providing integrated support to facilitate the translation of UCL's emerging research into therapies, techniques and medical devices with therapeutic value across UCL. The TRO works closely with a broad spectrum of investigators, industry partners and external funding bodies. Our aim is to support UCL investigators with practical help and expertise to explore the translational pathway for their research. We advise on translational funding schemes, develop and set up collaborations with industry partners and negotiate the hurdles and barriers that are inevitable encountered during the progression from idea to health benefit.
Presentations will take place in the Jeffery Hall

Posters 1-21 will be displayed in the Drama Studio

Posters 22-42 will be displayed in the Elvin Hall

Sponsor stands will be positioned in the Elvin Hall and the Drama Studio

Lunch and refreshments will be served in the Elvin Hall and the Drama Studio

Drinks reception will take place in the Crush Hall

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