

**Faculty of Medicine Research Conference**  
**Wednesday 12 June 2013**  
 Lecture Theatre 1, South Academic Block  
 Southampton General Hospital

**PROGRAMME**

08:30-09:00 **Coffee and Registration, Lecture theatre foyer  
Level B, South Academic Block**

09:00-09:10 **Introduction and Welcome**  
**Professor Iain Cameron**

**Session 1**

**Chair: Professor Martin Glennie**

09:10-09:25	Jane Gibson Exome analysis resolves secondary focal segmental glomerulosclerosis (FSGS), diagnosing X-linked Alport syndrome and indicating confounding effects of a mutation in NPHS1	Human Development and Health
09:25-09:40	Warayut Chotprakaikiat Development of HER-2 targeting vaccine for breast cancer	Cancer Sciences
09:40-09:55	Katrina Cathie RATNO - Reducing Antibiotic Tolerance using Nitric Oxide in Cystic Fibrosis – A phase 2 pilot study	Clinical and Experimental Sciences
09:55-10:10	Veronika Jenei Prostaglandin/growth factor receptor crosstalk promotes cancer invasion	Cancer Sciences
10:10-10:25	Jennifer Bryant Higher maternal vitamin D status in late pregnancy is associated with reduced aortic stiffness in 9 year old offspring assessed using magnetic resonance imaging	Human Development and Health
10:25-10:40	Charles Birts Maintenance of metabolic homeostasis by a p53-CtBP transcriptional network	Cancer Sciences
10.40-11.30	<b>POSTER SESSION 1 with Coffee (Odd numbered posters)</b>	

## PROGRAMME

### Session 2

**Chair: Professor Donna Davies**

11:30-11:45	Ali Roghanian Targeting the inhibitory Fc gamma receptor CD32B to augment immunotherapy	Cancer Sciences
11:45-12:00	Siwei Li Application of a novel perfusion bioreactor with integrated ultrasound standing wave trap for augmentation of cartilage tissue engineering	Human Development and Health
12:00-12:15	Adam Linley Determining the role of reactive oxygen species in the pathological behaviour of CLL	Cancer Sciences
12:15-12:30	Cornelia Blume A 3D model of the bronchial mucosa: Advantages of microfluidic culture conditions to study asthma mechanisms	Clinical and Experimental Sciences
12:30-12:45	Rebecca Clarke-Harris Peroxisomal proliferator activated receptor- $\gamma$ -co-activator-1 $\alpha$ promoter methylation in blood at 5-7 years predicts adiposity from 9 to 14 years.	Human Development and Health
12:45-13:00	Matthew Blunt Pifithrin $\mu$ induces the UPR dependent apoptotic pathway in Chronic Lymphocytic Leukaemia	Cancer Sciences
13:00-14:00	<b>LUNCH + POSTER SESSION 2 (Even numbered posters)</b>	

### Session 3

**Chair: Professor Paul Roderick**

14:00-14:15	Emily Wilkinson The Effect of Rhinovirus16 Infection on the Barrier Properties of Human Primary Bronchial Epithelial Cells	Clinical and Experimental Sciences
14:15-14:30	Emily Williams Epitope spreading induced by monoclonal antibody and peptide vaccination provides potent immunotherapy in murine neuroblastoma	Cancer Sciences
14.30-15:45	Jo Tod Eps8: A Master Regulator of Integrin-Dependent Pancreatic Cancer Invasion	Cancer Sciences
14.45-15:00	Alexandra Mant Image analysis using Imaris software reveals the endocytic retrieval of K2P3.1 and K2P9.1 potassium channels from the plasma membrane	Human Development and Health

**15:00-15:20 Afternoon Tea**

**Invited Speaker**

**15:20-16:20**

**Professor Sir Rory Collins**

Size matters: the need for large-scale population studies

**Session 4 Presentations by winners of the Research Prizes**

**Chair: Professor Tim Elliott**

**16:20-16:35**

**Wessex Medical Research Prize**

Tom Jackson

DNA damage causes TP53-dependent coupling of self-renewal and senescence pathways in embryonal carcinoma cells

Human Development and Health

**16:35-16:50**

**Postdoctoral Association Research Prize**

Emmajayne Kingham

Nanoscale topography cues augment mesenchymal and osteogenic differentiation of human embryonic stem cells

Human Development and Health

**16:50-17:05**

**NIHR/SoCAT Research Prize**

Katy Pike

Maternal late-pregnancy serum 25-hydroxyvitamin D in relation to childhood wheeze and atopic outcomes

Clinical and Experimental Sciences

**17:05-17:20**

**Michael Arthur Prize for Clinical Research**

Fergus Noble

Risk assessment using a novel score to predict anastomatic leak and major complications after oesophageal resection

Cancer Sciences

**17:20-17:30 Prize ceremony**

**17:30**

**Closing remarks**

**Professor Iain Cameron**

The conference will be followed by a cheese and wine reception

## POSTER PRESENTATIONS

Poster Number	Author	Title	Academic Unit
1	Chris Hanley	Reactive oxygen species production during myofibroblast transdifferentiation highlights NOX4 as a therapeutic target in the tumour stroma	Cancer Sciences
2	David R. Christensen	Regulation of Human Embryonic Stem Cell Metabolism	Human Development and Health
3	Salah Mansour	Towards rational iNKT cell based immunotherapy in human autoimmune disease	Clinical and Experimental Sciences
4	Sally Wheelwright	Health-related quality of life in cancer patients with cachexia	Cancer Sciences
5	Danya Agha-Jaffar	Polyunsaturated Fatty Acid Metabolism in Monocyte Differentiation	Human Development and Health
6	Sarah Williams	Role of acid sensitive two-pore domain (K2P) potassium channels in cancer progression	Human Development and Health
7	Nunzia Sposito	Advanced quantitative mass proteomics study for the characterisation of bone marrow stem cells	Cancer Sciences
8	Melanie Jannaway	Effect of resolvin D1 on leukotriene D4-induced constriction of isolated rat and human bronchioles	Clinical and Experimental Sciences
9	Chester Lai	Analysis of the immune infiltrate demonstrates defective immunity in cutaneous squamous cell carcinomas	Clinical and Experimental Sciences
10	Gessa Sugiyarto	Understanding Treg induced immuno-suppression of GSW11-specific T cells, involved in tumour rejection.	Cancer Sciences
11	Emma McMorrow	Modulation of Human Fetal Skeletal Stem Cell Fate and Function as a consequence of Surface Nanotopography	Human Development and Health
12	Agnieszka A. Janeczek	Targeting Wnt-loaded liposomes to skeletal stem cells for bone regeneration	Human Development and Health
13	Alex Paterson	Functionality of IgM memory B cells is dependent on T cell help	Cancer Sciences
14	Fay Chinnery	What is the time to publication for research funded by the NIHR Health Technology Assessment (HTA) Programme?	NETSCC
15	Jo Underwood	Kallikreins 5 and 7 are upregulated in human skin following application of irritants	Clinical and Experimental Sciences
16	Charlotte Gosden	Diabetes specialist services in the UK 2006 to 2009	Human Development and Health

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17	Reuben J. Pengelly	A method for sample identification in whole-exome sequencing studies	Human Development and Health
18	Christine Reitmayer	Lost in a cloud of diesel exhaust?	Clinical and Experimental Sciences
19	Vânia Coelho	Identification of circulating CLL intraclonal subgroups with varying B cell receptor function	Cancer Sciences
20	Samantha Maitland	Effects of angiotensin II and related peptides on intracellular Ca <sup>2+</sup> release in human lung fibroblasts	Clinical and Experimental Sciences
21	Nicole Yager	Ultraviolet B irradiation of human skin leads to increased phosphorylation of ribosomal protein S6	Clinical and Experimental Sciences
22	Stuart Armstrong	Pharmacokinetic study of nerve agent antidotes	Human Development and Health
23	Peter Austin	The effects of the presence or absence of lipid and glucose concentration in parenteral nutrition on the growth of <i>Staphylococcus epidermidis</i>	Human Development and Health
24	Sarah Bailey	Lysine specific demethylase (LSD1) inhibition as a potential treatment for Prostate Cancer	Cancer Sciences
25	Helen Parker	Genome-wide genetic analysis reveals global deregulation of methyltransferase genes in chronic lymphocytic leukemia	Cancer Sciences
26	Katarzyna Kuliga	A novel clinical tool for the non-invasive measurement of skin blood flow and tissue oxygenation	Human Development and Health
27	Jessica Rajaram	Human lung renin-angiotensin aldosterone system and its role in chronic obstructive pulmonary disease (COPD)	Clinical and Experimental Sciences
28	Ana Francisco Garcia	The involvement of microRNAs in macrophage response to viruses in asthma exacerbations	Clinical and Experimental Sciences
29	Lindsay Smith	Targeting BRCA1 splicing in breast cancer	Human Development and Health
30	Sajjad Rafiq	A genome wide meta-analysis study for identification of common variation associated	Cancer Sciences
31	Catherine Linley	Tumour immune evasion: the role of stromal myofibroblasts.	Cancer Sciences
32	Christina Black	The relationship between the healthfulness of mothers' main grocery stores and their quality of diet	Human Development and Health

Poster Number	Author	Title	Academic Unit
33	Wen Chean Lim	Endothelial-lymphocyte interaction causes proliferation and transient Foxp3 enrichment of CD4 <sup>+</sup> T lymphocytes	Clinical and Experimental Sciences
34	Andrew Hutton	Characterising the ability of pulmonary fibroblasts to act as non-professional antigen presenting cells	Clinical and Experimental Sciences
35	Eleanora Scorletti	Insulin resistance and glycaemic control but not liver fat mass, or visceral fat mass are associated with markers of liver fibrosis in non-alcoholic fatty liver disease	Human Development and Health
36	Charlie Cotter	Valproic acid inhibits epidermal differentiation in primary human keratinocytes via selective induction and repression of Notch pathway genes	Cancer Sciences
37	Emmanouil S. Papadakis	Characterisation of BAG-1 as a prognostic biomarker and therapeutic target in breast cancer	Cancer Sciences
38	Jade Forster	Refining the prognostic model for 11q-deleted chronic lymphocytic leukaemia	Cancer Sciences
39	Angela Tait	Development of multi-layered models of the human airway mucosa	Clinical and Experimental Sciences
40	Alastair Watson	The Development of Commercially Viable Collectins for Enhancement of Pulmonary Surfactant Therapies	Clinical and Experimental Sciences
41	Christine Gast	The majority of chronic kidney disease patients are unaware of their correct primary renal diagnosis	Human Development and Health
42	Joanna Greenhough	Bone marrow stromal cells of female <i>Bag-1</i> (Bcl-2-associated athanogene-1) heterozygous mice exhibit reduced osteogenic potential	Human Development and Health
43	Beatriz Valle-Argos	MYC as a potential target for therapeutic attack in chronic lymphocytic leukaemia	Cancer Sciences
44	Andrew Causon	Does systemic inflammation contribute to the cochlear degeneration found in age-related hearing loss?	IFLS
45	Sue Gerty	Breast Oncological surgical treatment of young women recruited to the Prospective study of Outcome of Sporadic versus Hereditary breast cancer (POSH)	Cancer Sciences
46	Claudia Tamarro	BRCA1 C.693G>A Induces Aberrant Splicing by effects on Regulatory Elements	Human Development and Health
47	Gaia Andreoletti	Identifying variants in next generation sequencing data of 61 paediatric Inflammatory Bowel Disease patients	Human Development and Health
48	Charles Pierce	The role of systemic infection and response to Ranibizumab therapy for Age Related Macular Degeneration (AMD)	Clinical and Experimental Sciences

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49	Harry Whitwell	A method to Isolate Human Alveolar Epithelial Type 1 and 2 Cells from Lung Wedge Resection using Fluorescence Activated Cell Sorting (FACS)	Clinical and Experimental Sciences
50	Sue Gerty	A decision-aid for young women diagnosed with early-stage breast cancer	Cancer Sciences
51	Emma Reeves	Naturally occurring ERAP1 haplotypes display divergent functions with fine substrate specificity	Cancer Sciences
52	Richard Dodds	The trajectory of grip strength across the life course: initial findings from five UK cohort studies	Human Development and Health
53	Rosanna Upstill-Goddard	A support vector machine classifier for estrogen receptor positive and estrogen receptor negative early-onset breast cancer	Human Development and Health
54	David Wright	How complete are intervention descriptions in published NIHR HTA funded trials?: A cross sectional study	NETSCC
55	Sheila Turner	High publication rate for funded studies from a major UK research funder: a cohort study	NETSCC
56	Anuradha D Arya	Identification and functional studies of novel FOX2 isoforms related to breast cancer	Human Development and Health
57	Zofi McKenzie	Surfactant Protein A and D mediated clearance of polystyrene nanoparticles by macrophages is dependent on surface functionalisation	Clinical and Experimental Sciences
58	Alison Yeomans	Inhibition of RNA Translation by Phenethyl Isothiocyanate	Cancer Sciences
59	Jason Fleming	The role of Tensin in thyroid cancer progression	Cancer Sciences
60	Richard McKendry	T cell exhaustion marker expression in the human lung in health and COPD in response to influenza infection	Clinical and Experimental Sciences
61	Tsiloon Li	Molecular Establishment of Bone Quality at the Microscale	Human Development and Health
62	Desiree Ludwig	Allergic drug reactions and the identification of those at risk of severe symptoms: Mast cells and basophils activation as key cellular mechanisms	Clinical and Experimental Sciences
63	Matthew Loxham	The Physicochemical and Inflammogenic Properties of Metal-Rich Airborne Particulates Collected at an Underground Railway Station	Clinical and Experimental Sciences
64	Harnish Patel	Feasibility of identifying satellite cells in skeletal muscle obtained from community dwelling older men	Human Development and Health

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65	Lyndsey Goulston	Knee osteoarthritis: is the association with obesity mechanical or metabolic	Human Development and Health
66	Megan Jarman	Does maternal use of overt and covert control practices on pre-school children's quality of diet change as children age? A longitudinal analysis	Human Development and Health
67	Sandi Dheensa	Consent and confidentiality in genetic medicine	Cancer Sciences
68	Mirella Cosma Spalluto	Epigenetic control of antiviral and innate immune response following viral infection in a lung epithelial model	Clinical and Experimental Sciences
69	Katy Pike	Body mass index at 3 years is associated with asthma at age 6 years	Clinical and Experimental Sciences
70	Maria Aguilar	Resistance to ibrutinib in CLL cells is related to the activation of a signalosome-independent pathway by CD40L	Cancer Sciences
71	Vinay Saunders	Thymosin beta 4 and microRNAs in the human foetal heart	Human Development and Health
72	Patrick Stumpf	Gene expression signatures of individual skeletal stem cells	Human Development and Health
73	Matthew Rose-Zerilli	Exome Sequencing in Patients with Progressive Chronic Lymphocytic Leukaemia	Cancer Sciences
74	Jessica Donaldson	Investigating the induction of thymic stromal lymphopoietin in human bronchial fibroblasts	Clinical and Experimental Sciences
75	Elodie Jane Siney	The migration of Glioblastoma stem/progenitor cells is increased by inhibition of the metalloproteinases ADAM10 & ADAM17	Clinical and Experimental Sciences
76	Shilong Lu	A micro multi-parameter in-vivo sensing platform for enhanced medical diagnostics	Human Development and Health
77	Nicola Irvine	Quality and quantity of maternal dietary fat in rats alters aorta composition in the adult offspring	Human Development and Health
78	Marta Ewa Polak	Distinct molecular signature of human skin Langerhans cells denotes novel pathways in immune regulation	Clinical and Experimental Sciences
79	Hannah Dorling	Checklist for key service intervention and context features	NETSCC
80	Claire Simner	The expression of facilitated amino acid transporters in the human choriocarcinoma BeWo cell line	Human Development and Health



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81	Emma Lofthouse	Glutamate efflux across the microvillous membrane of the placental syncytiotrophoblast is mediated by System Xc <sup>-</sup>	Human Development and Health
82	Massimiliano Mellone	Pre-replicative and replicative senescence drive fibroblast to myofibroblast differentiation via ROS generation and SMAD pathway	Cancer Sciences
83	Yu Hin Man	Tuneable polyacrylamide hydrogel affects epidermal cell colony behaviour	Human Development and Health
84	Rebecca Morgan-Walsh	Bronchial Epithelial Cells are protected from Rhinovirus infection by Sulforaphane, a Compound linked to Anti-oxidant Defence	Clinical and Experimental Sciences
85	Anna S. Tocheva	Qualitative defects of human invariant natural killer T cells in early type 1 Diabetes Mellitus	Clinical and Experimental Sciences
86	Carolina Paras Chavez	Acute and chronic impact of omega-3 fatty acids on metabolic and inflammatory markers in obese and lean subjects	Human Development and Health
87	Marina Parry	Genetic analysis of Splenic Marginal Zone Lymphomas reveals novel changes in pathways implicated in carcinogenesis	Cancer Sciences
88	Geoff Frampton	Evaluating the clinical and cost effectiveness of educational interventions for preventing vascular catheter bloodstream infections in critical care	SHTAC
89	Marco Peca	High-throughput skeletal stem cell separation using magnetic labelling and microfluidic sorting	Human Development and Health
90	Salah Mansour	Crystal structure of human CD1c at 2.8Å – A giant step towards new tools for the study of CD1c specific T cells in humans	Clinical and Experimental Sciences