MODERN VIEWS ON KIDNEY FUNCTION: THE LEGACY OF HOMER SMITH

27-29 AUGUST, 2014
RYDGES HOTEL, QUEENSTOWN, NEW ZEALAND

A satellite of the Queenstown Molecular Biology Meetings with *The Kidney In Health and Disease* Research Theme, University of Otago, and the Renal Scientists Group of the Australia and New Zealand Society of Nephrology

Contact: Jennifer.bedford@otago.ac.nz

Image: Michael Hickey, Small et al, JBO 19(2), 2014
PROGRAMME:

SESSIONS WILL BE IN THE BROAD CATEGORIES OF INTRARENAL SIGNALLING, DIABETES AND FIBROSIS, EXERCISE AND THE KIDNEY, GLOMERULAR DISEASE

REGISTRATION: $395, student registration $195 – both early bird. After that $450 and $280

ACCOMMODATION: $179/night twin share (breakfast NOT included)

DINNER: probably at Pier 19.

On the 27th August, there will be a welcome drinks and nibbles in the bar at Rydges – for those who have already arrived. Morning sessions will begin at 9.00 am.

We would like postgraduate students to chair the sessions. Please either get them to email me directly or send me their names and email addresses.

ABSTRACTS should be sent direct to me (Jennifer.bedford@otago.ac.nz). Please state whether you wish to give a talk or a poster.

The website (www.qmb.org.nz) should have more information on it in the next few days.

If you have any questions please contact me or Rob Walker (rob.walker@otago.ac.nz)

Look forward to meeting you all

Jenny

May, 2014
GUEST SPEAKERS

Dr Richard Coward MB,ChB, PhD, MRCP
Reader in Paediatric Nephrology, University of Bristol, United Kingdom

Richard did his undergraduate training at Bristol University and then specialised in Paediatrics gaining his MRCP in child health. His clinical training has been undertaken in the South West of England, Great Ormond Street, London and the Starship hospital in Auckland, New Zealand. It was during this time that he decided to specialise in Paediatric Nephrology. In 2001 he was awarded a PhD fellowship funded by the Royal College of Paediatrics and Wellchild to study the molecular biology of the podocyte. After this he was appointed as a consultant in Paediatric Nephrology at the Royal Hospital for Children in Bristol.

Research Interests: Molecular biology underlying glomerular disease and renal stone formation

Our research interests are in two areas; glomerular biology and the molecular biology of renal stones. Our work is based on conditionally immortalised cells derived from different parts of the kidney (both glomeruli and tubular cells) from man and mouse. Additionally, we have recently developed a number of transgenic murine models to further our knowledge of the importance of signalling pathways in these areas of the kidney. In the glomerulus we are focusing on the role of insulin and insulin-like growth factor signalling to the podocyte as we think this is potentially extremely important in understanding how kidney disease develops.
Dr Peter Deen PhD
Professor of Physiology, Radboud University, Nijmegen, The Netherlands

Peter Deen is a molecular cell physiologist interested in the (patho)physiology of integrative and renal water and sodium homeostasis regulation, with a molecular focus on the vasopressin V2 receptor and Aquaporin (AQP) water channels in health and disease. His team cloned the several renal AQP s and was the first to identify mutations in the AQP2 gene, leading to Nephrogenic Diabetes Insipidus (NDI), a disease in which humans cannot concentrate their urine and consequently void 10-15 liters of urine daily. By expression of the encoded mutant AQP2 proteins in appropriate cell models, his team deciphered the underlying mechanisms of recessive and dominant NDI. At present, his research focuses on causes of hypo- and hypernatremia, improved treatment in and understanding of congenital and acquired NDI, AQP2 ubiquitination, molecular tools to help patients suffering from a lethal calcium disorder, and, with Dr. Robben, understanding of the succinate and alpha-ketoglutarate receptor in water, sodium, and metabolic disorders. For his research, he obtained a KNAW fellowship, was the first European recipient of the prestigious Young Investigator Award of the American Physiological Society in 2001, and obtained a prestigious VICI grant in 2007. In May 2010, he was promoted to full professor in Cellular Physiology.
Dr Darren Kelly, PhD
University of Melbourne, Australia

Adjunct Professor Kelly is a Professorial Fellow at the University of Melbourne, Director of Biomedical Research in the Department of Medicine at St Vincent’s Hospital Melbourne and is an Adjunct Professor at ACU. He is also the Director and CEO of Fibrotech Therapeutics, a company developing orally active anti-fibrotic inhibitors to treat underlying pathological fibrosis in kidney and heart failure. His expertise lies in progressing pre-clinical novel interventions and developing experimental models of renal and cardiac disease.

He has published over 100 manuscripts, predominantly in high quality journals such as PNAS, Diabetes and the American Journal of Pathology. Many of these manuscripts have led to translational research that has had a direct impact on human disease. Darren Kelly has previously received major grants and fellowships from the NH and MRC and Juvenile Diabetes Research Foundation (JDRF) International. Darren Kelly is also a member of the Australian Institute of Company Directors and a Fellow of the American Society of Nephrology.
Dr Jeff Coombes, PhD

University of Queensland, Australia

Jeff Coombes is a Professor in the School of Human Movement Studies. He completed undergraduate degrees in applied science and education and a research Masters at the University of Tasmania before gaining a PhD from the University of Florida. After completing his PhD he returned to Australia to spend two years in an academic position at the University of Tasmania before moving to the University of Queensland in 2000.

Jeff’s research interests focus on determining the optimal exercise prescription for improving health. With theoretical backgrounds in biochemistry and physiology he conducts human studies and basic science projects. His findings have emphasised the importance of cardiorespiratory fitness for health benefits and many of his current projects are using high intensity interval to improve fitness and investigate outcomes. The basic science projects are identifying the mechanisms that explain the health benefits of exercise and include work in the cardiovascular and musculoskeletal systems at cellular and molecular levels. He is also a passionate advocate on the importance of fitness for health and delivers many presentations to impact on public health. His research group comprises doctors, postdoctoral fellows and PhD students and uses the extensive resources of the exercise physiology and exercise biochemistry laboratories in the School of Human Movement Studies. Current research projects of the group include;

- High intensity interval training in patients with chronic kidney disease
- High intensity interval training in patients with metabolic syndrome
- High intensity interval training in overweight and obese children and adolescents
- Cardiorespiratory fitness and outcome in patients receiving a liver transplant
- Multi-disciplinary lifestyle intervention in patients with chronic kidney disease
- Exercise training in patients with diabetic cardiac autonomic neuropathy
- Oxidative stress and antioxidant biomarkers to predict the cardiorespiratory fitness response to exercise
- Molecular mechanisms of exercise cardioprotection: relations with oxidative stress
- Activation of NRF2 by nutritional supplementation in patients with type 2 diabetes
- Exercise-training and skeletal muscle O-glycylcyclation
- Antioxidant supplementation in health and disease
Dr Bellamkonda K. Kishore, MD, PhD, MBA

University of Utah, USA

Bellamkonda Kishore is a Research Professor of Medicine (Nephrology), and Member of the Centre on Aging at the University of Utah Health Sciences Center, Salt Lake City, Utah. He is also a Principal Investigator at the George E. Wahlen Department of Veterans Affairs Medical Centre. During the past 3 decades he performed renal research in India, Japan, Belgium and the USA. He has been inducted as a Fellow of the American Society of Nephrology (FASN) and Fellow of the Society of Biology (FSB), United Kingdom.

His current major focus is the role of purinergic signalling in renal physiology, pathophysiology and experimental therapeutics. Purinergic signalling mediated by extracellular nucleotides and nucleosides is a relatively new area with a vast potential for developing a new class of drugs for a variety of diseases. Dr Kishore and his collaborators identified P2Y receptors (P2Y2 and P2Y12, specifically) as potential targets for the development of innovative therapies to treat water balance disorders, such as acquired nephrogenic diabetes insipidus (NDI), and diet-induced obesity and insulin resistance. They also uncovered the role of CD39 (NTPDase1) in the regulation of water and sodium handling by the kidney. Furthermore, they have developed a novel method for the induction of proliferation of erythropoietin-producing cells in the kidney, with potential therapeutic applications in anemia of chronic kidney disease. Over the years Dr Kishore’s laboratory has been supported by grants from the NIH, Dept. of Veterans Affairs, and the NKF of Utah and Idaho. He serves on the editorial boards of several journals, and has been a reviewer for study sections/grant review committees in the USA, Europe and Singapore.

In addition to his academic activities, Dr. Kishore is actively working to bring the renal purinergic community to a common platform. In collaboration with Dr. Volker Vallon (Univ. of California San Diego), he launched Renal Purinergic Club (RPC) with a listserv and LinkedIn Group (RPC Club). The RPC comprises more than 80 investigators on both sides of the Atlantic. This collective effort resulted in successfully organizing ancillary meetings in conjunction with major conferences such as the Kidney Weeks of the American Society of Nephrology and the Experimental Biology meetings sponsored by the FASEB.