



nature
genetics

PROGRAM

**ISN – Nature Genetics Forefronts Symposium on Nephrogenetics:
From Development to Physiology**

**March 8 – 11, 2007
Danvers, MA, USA**

Thursday, March 8, 2007

- 17:00 – 17:15** **Welcome and Opening Remarks**
- 17:15 – 18:00** **Keynote speech**
Richard Lifton, Yale University School of Medicine, USA

Friday, March 9, 2007

- 09:00 – 10:45** **Session 1: Morphogenesis**
Chair: Cathy Mendelsohn, USA
- Using zebrafish to explore the genetics of human kidney disease
Rebecca Burdine, Princeton University, USA
- Developmental defects that underlie reflux and urogenital tract obstruction: Revisiting the Bud Theory
Cathy Mendelsohn, Columbia University, USA
- From precursor to product: organogenesis of the mammalian kidney
Andy McMahon, Harvard University, USA
- GDNF/Ret signaling and ureteric bud branching morphogenesis
Frank Costantini, Columbia University Medical Center, USA
- 10:45 – 11:15** **Coffee & Networking Break**
- 11:15 – 12:45** **Session 2: Ion transport**
Chair: Steven Hebert, USA
- Tissue specificity of proton pumps and renal disease
Fiona Karet, Cambridge Institute for Medical Research, UK
- Insights into the Pathophysiology of Antenatal Type II Bartter's Syndrome from the ROMK Knockout Mouse
Steven C Hebert, Yale University School of Medicine, USA
- Regulation renal salt and water absorption by the collecting duct transcription factor, PPARgamma
Matthew D Breyer, Eli Lilly and Company, USA

- 12:45 – 14:00** **Lunch**
- 14:00 – 14:30** **Poster Session & Discussion**
- 14:30 – 15:30** **Session 3: Amino acid transport**
Chair: Robert Kleta, UK
- Clinical and up-to-date molecular findings in aminoacidurias
Robert Kleta, University College London, UK
- Aminoaciduria nephrogenetics
John Rasko, Centenary Institute of Cancer Medicine and Cell Biology, University of Sydney, Australia
- 15:30 – 16:00** **Coffee & Networking Break**
- 16:00 – 17:00** **Session 4: Renin-angiotensin system**
Chair: Marie-Claire Gubler, France
- Autosomal recessive renal tubular dysgenesis and the renin-angiotensin system
Marie-Claire Gubler, Institut National de la Santé et de la Recherche Médicale, France
- Angiotensin II and Epidermal Growth Factor receptor cross-talk in chronic kidney disease
Fabiola Terzi, Institut National de la Santé et de la Recherche Médicale, France
- 17:00 – 18:00** **Session 5: Steroid Resistant Nephrotic Syndrome**
Chair: Corinne Antignac, France
- Genetics of steroid-resistant nephrotic syndrome
Corinne Antignac, Institut National de la Santé et de la Recherche Médicale, France
- The slit diaphragm protein complex: a protein-lipid supercomplex involved in mechanosensation?
Thomas Benzing, University of Cologne, Germany

Saturday, March 10, 2007

- 09:00 – 10:45** **Session 6: Cilia / Polycystic Kidney Disease**
Chair: Heymut Omran, Germany
- HNF1beta in nephrogenesis and tubular planar cell polarisation
Marco Pontoglio, Pasteur Institute, France
- Ciliary signaling and polycystic kidney disease
Jing Zhou, Brigham & Women's Hospital, Harvard Medical School, USA
- The role of polycystins in renal tubulogenesis
Gregory Germino, Johns Hopkins University School of Medicine, USA
- Intraflagellar Transport (IFT) and Flagellar Assembly: New Insights into the Role of Cilia in Polycystic Kidney Disease (PKD)
Joel Rosenbaum, Yale University, USA
- 10:45 – 11:15** **Coffee & Networking Break**

11:15 – 12:45 **Session 6: Cilia / Polycystic Kidney Disease** (continued)

Mutations in OFD1 and RPGR responsible for syndromic forms of primary ciliary dyskinesia indicate functional properties of cystoproteins in motile cilia
Heymut Omran, University Hospital Freiburg, Germany

Calcium and cAMP in PKD Cells and Embryonic Kidneys
James P. Calvet, University of Kansas Medical Center, USA

Treatments for PKD targeting cAMP
Vicente Torres, Mayo Clinic College of Medicine, USA

12:45 – 14:00 **Lunch**

14:00 – 14:30 **Poster Session & Discussion**

14:30 – 16:00 **Session 7: Nephronophthisis**
Chair : Friedhelm Hildebrandt, USA

Cilia and centrosomes: a unifying pathogenic concept for cystic kidney disease?
Friedhelm Hildebrandt, University of Michigan, USA

Signaling and subcellular localization of nephrocystins
Gerd Walz, University Hospital Freiburg, Germany

Emerging roles for cilia in the regulation of Wnt signaling
Nicholas Katsanis, Johns Hopkins University, USA

Sunday, March 11, 2007

09:00 – 10:30 **Session 8: Fibrosis / EMT**
Chair: Eric Neilson, USA

Secreted Mediators of BMP and TGF-beta Signaling in Renal Disease
Gregory R Dressler, University of Michigan, USA

Molecular mechanisms of epithelial-mesenchymal transition (EMT) in the kidney
Eric Neilson, Vanderbilt University School of Medicine, USA

Notch2, but not Notch1, is essential for proximal fate acquisition in the mammalian nephron
Raphael Kopan, Washington University, USA

10:30 – 11:00 **Coffee & Networking Break**

11:00 – 12:30 **Session 9: Familial focal glomerulosclerosis**
Chair: Michelle Winn, USA

The role of alpha-actinin-4 in glomerular disease and function
Martin Pollak, Brigham & Women's Hospital, Harvard Medical School, USA

TRPC6 as a cause for Familial Focal and Segmental Glomerulosclerosis
Michelle Winn, Duke University Medical Center, USA

The cellular functions of polycystins
Stefan Somlo, Yale University, USA

12:30 – 12:45 **Concluding Remarks**