

Kidney Development and Repair Conference

February 8-9, 2007

**Hilton Alexandria Old Town Hotel
Alexandria, VA**

AGENDA

DAY ONE – Thursday, February 8, 2007

7:00 – 8:00 a.m. ***Registration and Continental Breakfast***

8:00 – 8:15 a.m. **Welcome and Opening Remarks**
Robert A. Star, M.D.
National Institute of Diabetes and Digestive and Kidney Diseases
National Institutes of Health

8:15 – 9:15 a.m. **Keynote Address:**
Kidney Development and Repair: Translational Outlook
Joseph V. Bonventre, M.D., Ph.D.
Brigham and Women's Hospital

SESSION I: **RENAL PROGENITORS AND LINEAGE PROGRESSION**
Moderator: *Gregory R. Dressler, Ph.D.*

9:15 – 9:40 a.m. **Factors Which Regulate Formation of the Intermediate Mesoderm**
Thomas M. Schultheiss, M.D., Ph.D.
Beth Israel Deaconess Medical Center and Harvard Medical School

9:40 – 10:05 a.m. **Specification of Proximal Versus Distal Tubule**
Raphael Kopan, Ph.D.
Washington University

10:05– 10:20 a.m. ***BREAK***

10:20 – 10:45 a.m. **Cell Lineages in Kidney during Development and Repair**
Peter Igarashi, M.D.
University of Texas Southwestern Medical Center

10:45 – 11:10 a.m. **Tail Bud-Derived Mesenchyme Patterns the Urinary Tract**
Doris Herzlinger, Ph.D.
Weill Cornell Medical College, Cornell University

11:10 – 11:35 a.m. **Linking Renal Epithelial Cell Specification to Epigenetic Imprinting Mechanisms**
Gregory R. Dressler, Ph.D.
University of Michigan

11:35 – 1:00 p.m. ***LUNCH (on your own)***

SESSION II: **DISEASE, DEVELOPMENT, AND REPAIR**
Moderator: *Lloyd Cantley, M.D.*

1:00 – 1:25 p.m. **Regulation of Epithelial Morphology during Tubule Repair**
Lloyd Cantley, M.D.
Yale University School of Medicine

1:25 – 1:50 p.m. **Epithelial-Mesenchymal Transitions (EMT) in Renal Fibrosis**
Eric G. Neilson, M.D.
Vanderbilt University School of Medicine

DAY ONE – Thursday, February 8, 2007 continued

- 1:50 – 2:15 p.m. **Iron Transport in the Kidney**
Jonathan M. Barasch, M.D., Ph.D.
Columbia University
- 2:15 – 2:40 p.m. **Cholesterol Accumulation: Implications for Cell Injury and the Post Injury
Cytoresistant State**
Richard A. Zager, M.D.
University of Washington
- 2:40 – 3:05 p.m. **Piecing Together the Renal Fibrosis Puzzle**
Allison A. Eddy, M.D.
Children’s Hospital and Regional Medical Center and the University of Washington
- 3:05 – 3:30 p.m. **Regulation of mTOR and STAT6 by Polycystin-1: Is Polycystic Kidney
Disease a Case of Futile Repair?**
Thomas Weimbs, Ph.D.
University of California at Santa Barbara
- 3:30 – 4:00 p.m. BREAK**
- 4:00 – 6:30 p.m. POSTER SESSION**
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DAY TWO – Friday, February 9, 2007

- 7:00 – 8:00 a.m. Continental Breakfast**
- 8:00 – 9:00 a.m. **Keynote Address:**
Developmental Recapitulation by Embryonic Stem Cells
Douglas Melton, Ph.D.
Harvard University
- SESSION III: KIDNEY CELLULAR NICHES**
Moderator: Melissa Little, Ph.D.
- 9:00 – 9:25 a.m. **Defining Progenitor Populations, Niches, and Potential Repair Factors Via
Comprehensive Temporospatial Gene Expression Analysis of Renal
Development and Disease**
Melissa Little, Ph.D.
The University of Queensland, Brisbane, Australia
- 9:25 – 9:50 a.m. **Cellular Crosstalk Required for Glomerular Development**
Susan Quaggin, M.D.
University of Toronto, Ontario, Canada
- 9:50 – 10:15 a.m. **Cell/Extracellular Matrix Interactions in the Kidney**
Jeffrey H. Miner, Ph.D.
Washington University School of Medicine
- 10:15 – 10:45 a.m. BREAK**
- 10:45 – 11:10 a.m. **Stem Cells and Their Niche in the Adult Kidney**
Qais Al-Awqati, M.B., Ch.B.
Columbia University School of Physicians and Surgeons
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DAY TWO – February 9, 2007 continued

- 11:10 – 11:35 a.m. **Role of FGFs in Regulating Branching and Nephron Number**
Carl Bates, M.D.
Columbus Children's Research Institute
- 11:35 – 12:00 noon **From Precursor to Product: Nephrogenesis in Mammalian Kidney Development**
Andrew McMahon, Dr.P.H.
Harvard University
- 12:00 – 1:30 p.m.** **LUNCH** (on your own)
- 1:30 – 1:45 p.m. **Hot Topic Speaker #1 –**
WTIP Is Required for Normal Development of the Zebrafish Pronephros
Tomoko Obara, Ph.D.
MetroHealth Medical Center, Case Western Reserve University
- 1:45 – 2:00 p.m. **Hot Topic Speaker #2 –**
Four-Dimensional Imaging of Renal Vascularization in Living Mouse Embryos
Deborah Hyink, Ph.D.
Mount Sinai School of Medicine
- 2:00 – 2:15 p.m. **Hot Topic Speaker #3 –**
Isolation and Expansion of Resident Murine Kidney Stem Cells to Accelerate Recovery in Damaged Kidneys
Patricia Agreda
Johns Hopkins University School of Medicine
- SESSION IV:** **LOOKING FORWARD TO TRANSLATION**
Moderator: *Joseph V. Bonventre, M.D., Ph.D.*
- 2:15 – 2:40 p.m. **Tissue Engineering: Considerations and Uses**
Linda G. Griffith, Ph.D.
Massachusetts Institute of Technology
- 2:40 – 3:05 p.m. **Directed Tissue Self-Assembly: How to Print Kidney?**
Vladimir A. Mironov, M.D., Ph.D.
Medical University of South Carolina
- 3:05 – 3:30 p.m. **Scar Free Healing: From Accidental Discovery to Potential Human Pharmaceuticals**
Mark W.J. Ferguson, Ph.D., FDS, FFD, F.Med.Sci., C.B.E.
University of Manchester, Manchester, England
- 3:30 – 3:45 p.m.** **BREAK**
- 3:45 – 5:00 p.m. **Panel Discussion:** What are scientific requirements for development of renal cell therapies? How should developmental and injury/repair studies inform each other? In what ways might tissue-engineered models illuminate disease processes? Are tissue-engineered/cell therapies feasible for the kidney?
- 5:00 p.m. **Adjourn the Meeting**