

ISN Forefronts Symposium on Renal and Extrarenal Control of Acid-Base Homeostasis in Health and Disease
September 17-20, 2009
Florence, Italy

Thursday, September 17, 2009

- 16:45 – 17:00** **Welcome and Opening Remarks**
Carsten A Wagner, *University of Zurich, Switzerland*
Reto Krapf, *University of Basel, Switzerland*
Giovambattista Capasso, *University of Naples, Italy*
Orson W. Moe, *University of Dallas, USA*
- 17:00 – 18:00** **Opening Plenary Lecture**
Chair: Carsten Wagner, University of Zurich, Switzerland
- Proton-activated receptors**
Klaus Seuwen, *Novartis Institutes for Biomedical Research, Switzerland*
- 20:00 – 21:30** **Welcome reception**

Friday, September 18, 2009

- 08:45 – 09:00** **Welcome address**
Antonio Dal Canton, *President of the Italian Society of Nephrology*
- 09:00 – 10:30** **Session 1: (Renal) acid-base transport proteins I**
Chair: Orson Moe, University of Dallas, USA
- The Na/H exchangers**
Peter Aronson, *Yale School of Medicine, USA*
- Anion exchangers of the SLC4 and SLC26 families**
Seth Alper, *Beth Israel Deaconess Medical Center, USA*
- V-ATPase proton pumps**
Dennis Brown, *Harvard Medical School, USA*
- 10:30 – 11:00** **Coffee and Networking Break**
- 11:00 – 12:30** **Session 2: (Renal) acid-base transport proteins II**
Chair: Carsten Wagner, University of Zurich, Switzerland
- CIC Chloride/proton exchangers**
Thomas Jentsch, *FMP Berlin, Germany*
- Sodium-dependent bicarbonate transporters**
Ira Kurtz, *UCLA, USA*
- Interactions of carbonic anhydrase and transporters**

Joseph Casey, *University of Alberta, Canada*

12:30 – 14:00

Lunch

14:00 – 14:30

Poster Session & Discussion

14:30 – 16:00

Session 3: Ammoniogenesis and ammonium excretion

Chair: Mark Knepper, *NIH, USA*

Regulation of proximal tubule ammoniogenesis

Norman Curthoys, *Colorado State University, USA*

Structure and function of Rhesus proteins

Fritz K Winkler, *Paul Scherrer Institute, Switzerland*

Role of Rhcg in renal ammonium excretion

Olivier Devuyst, *University of Louvain Medical School, Belgium*

16:00 – 16:30

Coffee & Networking Break

16:30 – 18:00

Session 4: Sensors and regulators

Chair: Robert Alpern, *xx, USA*

CO₂ sensors

Walter Boron, *Case Western Reserve University, USA*

Intracellular pH sensing

Patricia Preisig, *Yale University, USA*

CO₂/HCO₃ regulated adenylyl cyclases

Lonny Levin, *Weill Cornell Medical College, USA*

18:00 – 19:00

Evening Plenary Lecture

Ocean acidification

Victoria J Fabry, *California State University, USA*

20:00 – 21:30

Dinner

Saturday, September 19, 2009

09:00 – 10:30

Session 5: Adaptive responses and regulation

Chair: Dennis Brown, *xx, USA*

The Hensin pathway and intercalated cell plasticity

Qais Al-Awqati, *Columbia University, USA*

Modulation of TRP channels by protons

Shmuel Muallem, *University of Texas Southwestern Medical Center, USA*

Pendrin and chloride regulation

Dominique Eladari, *INSERM, France*

- 10:30 – 11:00** **Coffee & Networking Break**
- 11:00 – 12:30** **Session 6: Disorders of Renal Acid Excretion**
Chair: Giovambattista Capasso, University of Naples, Italy
- H-ATPases and dRTA**
Daniel Fuster, *University of Berne, Switzerland*
- AE1 and dRTA**
Ashley Toye, *University of Bristol, UK*
- Diagnosis and Treatment of dRTA**
Robert Unwin, *University College London, UK*
- 12:30 – 14:00** **Lunch**
- 14:00 – 15:30** **Session 7: Clinical aspects of acid-base homeostasis**
Chair: Reto Krapf, University of Basel, Switzerland
- The metabolic syndrome and renal acidification: Mechanisms and consequences**
Khashayar Sakhaee, *UT Southwestern Medical Center, USA*
- Regulation of renal acid excretion by protons and CO₂: The maladaptive renal response revisited ...and reminded**
Nicolao E. Madias, *Caritas St.Elizabeth's Medical Center, USA*
- Intra- and extracellular pH regulation in tumor growth and invasion**
Richard Vaughan-Jones, *University of Oxford, UK*
- 15:30 – 16:30** **Poster Session & Discussion**
- 16:30 – 18:00** **Social Activity (TBC)**
- 18:00 – 20:00** **Dinner**

Sunday, September 20, 2009

- 09:00 – 10:30** **Session 8: Extrarenal control of acid-base homeostasis**
Chair: Henry N. Hulter, Genentech Inc., USA
- Physicochemical and cellular effects of metabolic acidosis in bone**
David Bushinsky, *University of Rochester School of Medicine, USA*
- CO₂ chemoreception and respiratory control**
Robert Putnam, *Wright State University Boonshoft School of Medicine, USA*

The gut and acid-base transport/homeostasis

John Geibel, *Yale University School of Medicine, USA*

10:30 – 11:00

Coffee & Networking Break

11:00 – 12:30

Session 9: Acid-base in model organisms

Chair: TBC

Protons as neurotransmitter in *C. elegans*

Eric M Jorgensen, *xx, USA*

Acid-Base Homeostasis in the Diving Turtle

Donald C Jackson, *Brown University, USA*

CO₂ detection in insects

Leslie B Vosshall, *The Rockefeller University, USA*

12:30 – 12:45

Concluding Remarks

Carsten A Wagner, *University of Zurich, Switzerland*

Reto Krapf, *University of Basel, Switzerland*

Giovambattista Capasso, *University of Naples, Italy*

Orson W. Moe, *University of Dallas, USA*