

**Thursday, 6<sup>th</sup> of May, 2010**

**Theoretical Course: “Fundamental Principles of Sensory Processing”**

**Friday, 7<sup>th</sup> of May, 2010**

**9:00-9:10 Welcome**

Prof. Dr. med. Tobias Moser, University of Göttingen School of Medicine

**9:10-10:55 Calcium permeable ion channels in sensory function I**

**Chair:** Martin Göpfert

9:10-9:45 Gary Lewin, Berlin

*Molecular basis of somatic transduction*

9:45-10:20 Bernd Nilius, Leuven

*Sensing with TRP channels: how irritant!*

10:20-10:55 Roger Hardie, Cambridge

*TRP channels and phototransduction*

**10:55-11:25 Poster and Coffee**

**11:25-12:40 Spatiotemporal properties of cellular calcium signals and their determinants I**

**Chair:** Mark Rutherford

11:25-12:00 William Roberts, Eugene

*Membrane potential oscillations, calcium spikes and synaptic transmission in the frog sacculus*

12:00-12:20 Thomas Frank, Göttingen

*Shot to ribbons without a ribbon? Synaptic organization and function in Bassoon mouse mutants*

12:20-12:40 Volker Scheuss, Martinsried

*Short-term Plasticity of Calcium Extrusion*

**12:40-14:00 Lunch buffet**

**14:00-15:00 Poster and Coffee**

**15:00-16:30 Calcium regulation of sensory processing: from transduction to coding to representation and information storage in the CNS I**

**Chair:** Tobias Moser

15:00-15:35 Ralf Schneggenburger, Lausanne  
*RIM proteins and Ca<sup>2+</sup>-secretion coupling at a large CNS auditory synapse*

15:35-15:55 Stefan Hallermann, Leipzig  
*Bassoon speeds vesicle recruitment at a central excitatory synapse*

15:55-16:30 Frank Zufall, Homburg  
*Recognition and coding of social cues by the mammalian olfactory system*

**16:30-17:00 Coffee and Posters**

**17:00-18:30 Calcium regulation of sensory processing: from transduction to coding to representation and information storage in the CNS II**  
**Chair:** Detlev Schild

17:00-17:35 Rainer Friedrich, Basel  
*Pattern classification by neuronal ensembles in the olfactory bulb*

17:35-17:55 Andreas Schaefer, Heidelberg  
*Ca signalling and odor discrimination in the mammalian olfactory bulb*

17:55-18:30 Andre Fiala, Göttingen  
*Optical calcium imaging of olfactory representations in the *Drosophila* brain*

**Wine and cheese (Cafeteria)**

**Saturday, 8th of May, 2010**

**9:00-11:50 Calcium permeable ion channels in sensory function II**  
**Chair:** Ellen Reisinger

9:00-9:35 Anthony Ricci, Stanford  
*High speed calcium imaging can localize site of mechanotransduction*

9:35-10:10 Martin Schwander, La Jolla  
*The mechanotransduction machinery of hair cells*

**10:10-10:40 Coffee and Posters**

- 10:40-11:15 Amy Lee, Iowa City  
*Regulation of Cav1 Ca<sup>2+</sup> channels by CaBPs in the retina and inner ear*
- 11:15-11:50 Jutta Engel, Homburg  
*Multifunctional Cav1.3 calcium channels in mammalian hair cells*
- 11:50-13:00 Calcium regulation of sensory processing: from transduction to coding to representation and information storage in the CNS III**  
**Chair:** Jeong Seop Rhee
- 11:50-12:25 Benjamin Odermatt, Cambridge  
*In vivo imaging of fluorescent reporter proteins to investigate synaptic function and neuronal network activity in zebrafish*
- 12:25-13:00 Joshua Singer, Chicago  
*One channel, one vesicle; two channels, two vesicles: transmission at an analog ribbon synapse*
- 13:00 Farewell**  
Cornelius Frömmel, Dean of the University of Göttingen School of Medicine