Collaborative Research Center 894

**Ca**²⁺ Signals: Molecular Mechanisms and Integrative Functions

Reception, processing and transfer of information are fundamental to higher organisms. Among a myriad of signaling molecules, **Ca**²⁺ ions stand out. Their concentration in the cytosol of most cells is kept at an extremely low level (≤ 100 nM) allowing small changes in calcium flux to have far reaching effects.

The Collaborative Research Center 894 investigates a wide range of **Ca**²⁺ signaling, from the molecular mechanisms of their creation to their integrative effects on the whole body. The objective of the CRC 894 is to examine how subcellular **Ca**²⁺ signals control the physiological behavior of whole organs.

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**Hotel**

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**Venue**

Saarland University
Faculty of Medicine
CIPMM | Building 48
66421 Homburg

GPS:
Universitätsklinikum des Saarlandes
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66424 Homburg

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**SFB 894 SYMPOSIUM**

Cutting edge concepts in Calcium signaling

May 5 to 7, 2016

Saarland University | CIPMM | Building 48 | Homburg
**Thursday, May 5, 2016**

12.30  Welcome Lunch  

**Session I - Chair: Jens Rettig**

14.00  Per-Olof Berggren, Stockholm  
A natural body window to pancreatic β-cell signal-transduction.  

14.45  Ege Kavalali, Dallas  
Spontaneous neurotransmitter release: A driver for Ca\(^{2+}\) signaling.  

15.30  Manfred Lindau, Ithaca  
The Fusion Nanomachine.  

16.15  Coffee Break  

**Session II - Chair: Dieter Bruns**

16.45  Uri Ashery, Tel Aviv  
Modulation of synaptic plasticity and neuronal network activity.  

17.30  Arthur Konnerth, Munich  
mGlur1/TRPC-mediated calcium signaling in cerebellar Purkinje cells.  

18.15  Dinner & Poster Session  

19.30  Plenary Lecture  
Katsuhiko Mikoshiba, Hirosawa Wako City  
IP3 receptor/ER Ca\(^{2+}\) channel, a nexus in cell dynamics.  

**Friday, May 6, 2016**

**Session III - Chair: Frank Zufall**

9.00  Gerald Obermair, Innsbruck  
Presynaptic α2δ subunits are key organizers of glutamatergic synapses.  

9.45  Patricia Hidalgo, Jülich  
Intracellular transport of L-type calcium channels: A hitchhiker mechanism for the α- and β-subunits?  

10.30  Yasuo Mori, Kyoto  
Redox physiology of TRP channels.  

11.15  Coffee Break  

**Session IV - Chair: Veit Flockerzi**

11.45  Reinhold Penner, Honolulu  
Relationship status of CRAC and TRP channels in store depletion and refilling: It’s complicated.  

12.30  Thomas Voets, Leuven  
TRP channels as sensors of burning pain.  

13.15  Lunch & Lab Tour  

14.15  Group Photo  

14.30  Shmuel Muallem, Bethesda  
The Orai1-STIM1 at the ER/PM junctions in health and disease.  

15.15  Christian Rosenmund, Berlin  
Molecular insights in synaptic vesicle docking and fusion at central synapses.  

16.00  Coffee Break  

**Session V - Chair: Ulrich Boehm**

16.30  Patrice Mollard, Montpellier  
Calcium signals in the hypothalamus-pituitary system.  

17.15  Barbara Ehrlich, New Haven  
Calcium and the inner life of cells: regulation and pathophysiology of calcium signaling.  

18.00  Maiken Nedergaard, Copenhagen  
Ionostatic control of the sleep-wake cycle.  

18.45  Barbecue & Poster Session  

**Saturday, May 7, 2016**

**Session VI - Chair: Jutta Engel**

9.00  Joe Casey, Edmonton  
Membrane transport protein, SLC4A11, in genetic corneal blindness.  

Imaging calcium movements in adult cochlea.  

10.30  Martin van der Laan, Homburg  
Mitochondrial membrane architecture: Key determinants and physiological implications.  

11.15  Poster Award & Coffee Break  

**Session VII - Chair: Markus Hoth**

11.45  Annette Beck-Sickinger, Leipzig  
GTP or Arrestin? - Biased signaling of G-Protein coupled receptors.  

12.30  Alexander Flügel, Göttingen  
The leptomeninges: A checkpoint for autoimmune effector T cells on their way into the CNS.  

13.15  Janis Burkhardt, Philadelphia  
Cytoskeletal control of T cell activation: action and traction at the immunological synapse.  

14.00  Lunch and Departure  

**Photos:** Hsin-Fang Chang