

Collaborative Research Center 894

Ca²⁺ Signals: Molecular Mechanisms and Integrative Functions

Reception, processing and transfer of information are fundamental to higher organisms. Among a myriad of signaling molecules, Ca²⁺ 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 Ca²⁺ 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 Ca²⁺ signals control the physiological behavior of whole organs.

Hotel

Wohlfühlhotel Rabenhorst
Am Rabenhorst 1
D-66424 Homburg

GPS: Kraepelinstraße
+49 6841 93 300
info@hotel-rabenhorst.de
www.hotel-rabenhorst.de

Contact

Univ.-Prof. Dr. Jens Rettig
Speaker of the CRC 894

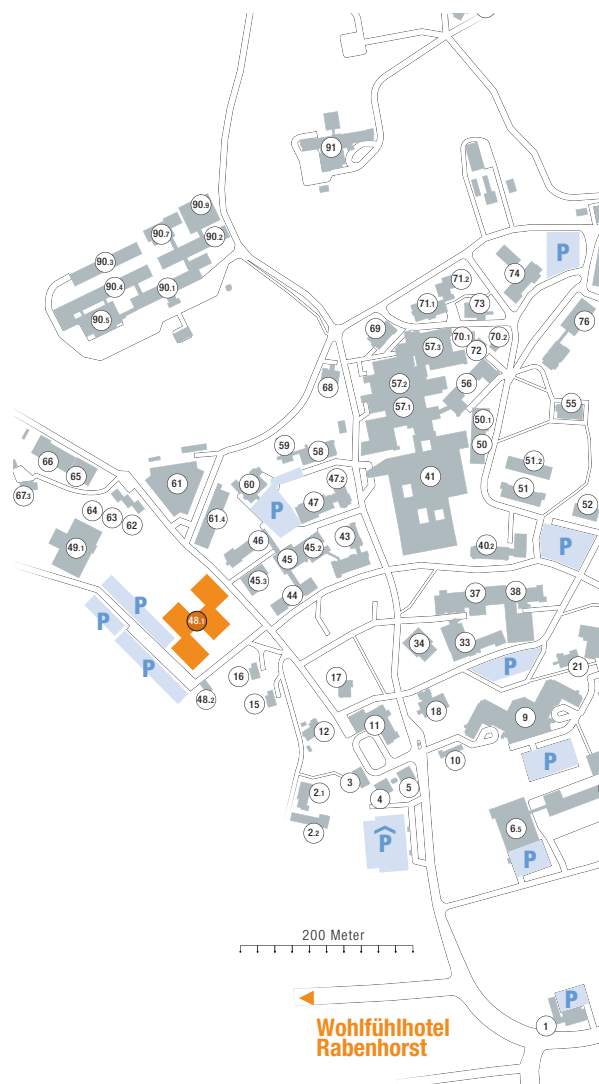
Josephine Kretschmer, M.A.
Coordination

<http://sfb894.uni-saarland.de/en/start/>
sfb894@uks.eu
+49 6841 1616401
+49 160 2524410



Venue

Saarland University
Faculty of Medicine
CIPMM | Building 48
66421 Homburg
GPS:
Universitätsklinikum des Saarlandes
Kirrberger Straße 100
66424 Homburg



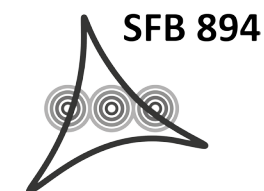
Saarland University

SFB 894 SYMPOSIUM

Cutting edge concepts in Calcium signaling

May 5 to 7, 2016

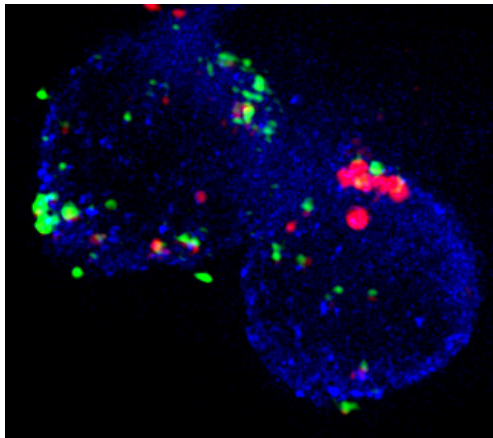
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Building 48 | Homburg



Sonderforschungsbereich 894

Ca²⁺ Signals:
Molecular Mechanisms and
Integrative Functions

AGENDA



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 $\alpha 2\delta$ 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

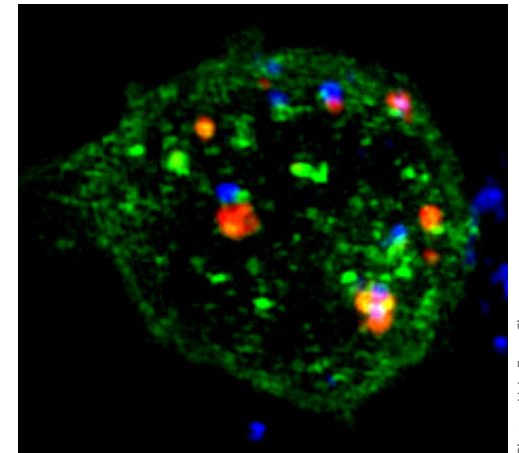
Saturday, May 7, 2016

Session VI - Chair: Jutta Engel

- 9.00 **Joe Casey, Edmonton**
Membrane transport protein, SLC4A11, in genetic corneal blindness.
- 9.45 **Jonathan Ashmore, London**
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-Sicking, 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