

Sunday, September 3rd, 2017

**VENUE: HOTEL MARRIOTT, VANGEROWSTRASSE 16,
69115 HEIDELBERG**

09:00 onwards Registration
10:50 Welcome and announcements

**Session 1: Brain circuits, pain processing and
modulation - I**

Chair: Herta Flor

Central Institute of Mental Health,
Mannheim and Heidelberg University,
Germany

**11:00-11:30 Concepts, learning and pain
modulation**
Tor Wager, University of Colorado
Boulder, USA

11:30-12:00 Cortical Dynamics of Pain and Passion
Vania Apkarian, Northwestern Univ., USA

**12:00-12:30 Going in circles with opioids for pain
relief**
Frank Porreca, University of Arizona
Health Sciences, USA

12:30-12:45 Poster teasers

12:45-14:45 Lunch and Poster session

Session 2: **Challenges and advances in pain treatment**

Chair: Martin Schmelz

Heidelberg University, Germany

14:45-15:15 **Non- invasive brain stimulation: a new treatment option for chronic pain?**

Didier Bouhassira, Inserm 987, Boulogne-Billancourt, France

15:15-15:45 **Neuropathic pain: aligning animal models with the clinical picture**

Andrew Rice, Imperial College London, UK

15:45-16:15 **Voltage-gated sodium channels as targets in pain therapy**

Carla Nau, University of Lübeck, Germany

16:15-17:00 **Coffee break, free time**

Session 3: **Brain circuits, pain processing and modulation – II**

Chair: Sabine Herpertz

Heidelberg University, Germany

17:00-17:30 **Nocebo effects in visceral pain**

Sigrid Elsenbruch, University of Essen, Germany

17:30-18:00 **Persistent postsurgery pain: From prediction to treatment**

Eija Kalso, University of Helsinki, Finland

18:00-18:30

**Micro-state and macro-state dynamics
in thalamocortical circuits: scientific
discovery leading to quantitative pain
assessment**

Carl Saab, Brown University, USA

18:30-19:30

Informal reception with finger food

Monday, September 4th, 2017

**VENUE: SCHWETZINGEN PALACE, SCHLOß MITTELBAU
SCHWETZINGEN**

Session 4: Peripheral afferents and mechanisms

Chair: Stefan Lechner

Heidelberg University, Germany

09:00-09:30 Sensory mechanotransduction and the origins of pain

Gary Lewin, Max-Delbrück Centre, Berlin, Germany

09:30-10:00 Untangling afferent coding strategies with population recording

Yves DeKoninck, Laval University, Quebec, Canada

10:00-10:30 Somatosensory neuron types and their functions

Xu Zhang, Institute of Neuroscience, Chinese Academy of Sciences, China

10:30-11:00 Coffee break

Session 5: Spinal cord circuits and their plasticity in pain

Chair: Norbert Weidner

Heidelberg University, Germany

- 11:00-11:30** **Neural stem cell therapy in spinal cord injury: spinal cord “replacement” enables host axonal regeneration**
Mark Tuszynski, University of California, San Diego, USA
- 11:30-12:00** **Take a step back: mapping spinal circuits and revisiting "pain" measurement in mice**
Qiufu Ma, Harvard Medical School, Boston, USA
- 12:00-12:30** **Genetic approaches to mapping the spinal circuitry for pain and itch**
Martyn Goulding, Salk Institute of Biological Sciences, San Diego, USA
- 12:30-12:45** **Poster teasers**
- 12:45-14:30** **Lunch and Poster Session**
- 14:30-16:45** **Young Scientist Symposium**
- Introduction:** **Linette Tan**

Chairs: Christopher Sliwinski, Paul Naser, Shiying Lu
- 14:30-15:30** **Workshop on publishing: Communicating your research: Demystifying the editorial and peer review processes at Nature research journals**

Brett Benedetti, Associate Editor at Nature Medicine

Chairs: Britta Kretzschmar, Katrin Usai

- 15:30-15:45** **Preserved somatotopic maps of the digits in Complex Regional Pain Syndrome**
Flavia Mancini, University of Cambridge, UK
- 15:45-16:00** **Nociceptive gamma-band oscillations recorded from the human insula**
Giulia Liberati, Université catholique de Louvain, Belgium
- 16:00-16:15** **Network dynamics of nociceptive and aversive processing in the anterior cingulate cortex**
Fernando Kasanetz, University of Bern, Switzerland
- 16:15-16:25** **The mid-cingulate cortex to posterior insula pathway plays a key role in nociceptive hypersensitivity**
Linette Tan (SFB 1158, Project B01)
- 16:25-16:35** **Probing oxytocin neurons activity in socially interacting rats**
Yan Tang (SFB 1158, Project B02)
- 16:35-16:45** **Measures of cortical plasticity in amputees and impact on current theories on phantom limb pain**

Christopher Milde (SFB 1158, Project B07)

16:45-17:45 **Coffee break, free time**

Session 6: **Flashback**

17:45-18:05 **A tale of two tails**
Thomas Sears (introduced by Steve McMahon)

18:05-18:25 **Jänig, Schmidt & Zimmermann: 50 years ago in Heidelberg: Science and its consequences**
Wilfrid Jänig (introduced by Jerry Gebhart)

18:25-18:45 **Nociceptors and pruriceptors: pipe dreams of physiologists-or the basis of pain and itch perception?**
Hermann Handwerker (introduced by Walter Zieglgänsberger)

18:45-19:15 **Short break**

19:15-19:45 **Music recital**

19:45-22:00 **Conference dinner**

Tuesday, September 5th, 2017

**VENUE: SCHWETZINGEN PALACE, SCHLOß MITTELBAU
SCHWETZINGEN**

Session 7: Young Scientist Symposium

Chairs: Francisco Taberner, Robin Jonas

- 09:00-09:20** **Mechanisms underlying the transition from acute to chronic pain: Insights from an atypical myosin protein**
Aziz Moqrich, Institut de Biologie du Développement de Marseille, France
- 09:20-09:40** **Presynaptic NMDARs localized in spinal terminals of nociceptors state-dependently modulate spinal synaptic transmission and chronic inflammatory pain hypersensitivity**
Ceng Luo, Fourth Military Medical University, Xi'an, China
- 09:40-10:00** **Repairing spinal cord inhibitory circuits with cell transplants to treat chronic pain**
Joao Braz, University of California, San Francisco, USA
- 10:00-10:15** **Pain and neuro-immune interactions mediate the pathogenesis of necrotizing fasciitis**

Felipe Ribeiro, Harvard Medical School,
USA

10:15-10:25 **The molecular mechanism of NGF-induced mechanical hyperalgesia**
Vincenzo Prato (SFB 1158, Project A01)

10:25-10:35 **Distal symmetric diabetic polyneuropathy structural nerve remodeling differs between diabetes type I and II: an in vivo study using MRI neurography**
Johann Jende (SFB 1158, Project A03)

10:35-10:45 **Interaction of nociceptive and non-nociceptive afferents within the spinal trigeminal nucleus**
Margot Maurer (SFB 1158, Project A04)

10:45-10:55 **Elucidating new axonal regenerative pathways for clinical intervention following spinal cord injury**
Radhika Puttagunta (SFB 1158, Project A06)

10:55-11:05 **Low back pain model in mice and the impact of stress**
Carmen La Porta (SFB 1158, Project S01)

11:05-11:45 **Coffee break**

Session 8: **Interplay between afferents, spinal neurons and glia**

Chair: Thomas Kuner

Heidelberg University, Germany

- 11:45-12:15** **Sensory neuron-derived CSF1, microglia-astrocyte interactions and peripheral nerve injury-induced neuropathic pain**
Allan Basbaum, University of California, San Francisco, USA
- 12:15 -12:45** **Transcriptional profiling of nociceptive neurons in health and disease**
Stephen McMahon, King's College London, UK
- 12:45-13:30** **Lunch**
- 13:30: 13:45** **Poster prize distribution**
Moderated by Norbert Weidner
- 13:45-14:45** **Poster prize talks**
- 14:45-16:15** **Meeting of Scientific Advisory Board of the Heidelberg Pain Consortium (SFB 1158)**