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 Tuszyński, 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
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:45-17:45</td>
<td><strong>Coffee break, free time</strong></td>
</tr>
<tr>
<td><strong>Session 6:</strong></td>
<td><strong>Flashback</strong></td>
</tr>
<tr>
<td>17:45-18:05</td>
<td><strong>A tale of two tails</strong></td>
</tr>
<tr>
<td></td>
<td>Thomas Sears (introduced by Steve McMahon)</td>
</tr>
<tr>
<td>18:05-18:25</td>
<td><strong>Jänig, Schmidt &amp; Zimmermann: 50 years ago in Heidelberg: Science and its consequences</strong></td>
</tr>
<tr>
<td></td>
<td>Wilfrid Jänig (introduced by Jerry Gebhart)</td>
</tr>
<tr>
<td>18:25-18:45</td>
<td><strong>Nociceptors and pruriceptors: pipe dreams of physiologists-or the basis of pain and itch perception?</strong></td>
</tr>
<tr>
<td></td>
<td>Hermann Handwerker (introduced by Walter Zieglgänsberger)</td>
</tr>
<tr>
<td>18:45-19:15</td>
<td><strong>Short break</strong></td>
</tr>
<tr>
<td>19:15-19:45</td>
<td><strong>Music recital</strong></td>
</tr>
<tr>
<td>19:45-22:00</td>
<td><strong>Conference dinner</strong></td>
</tr>
</tbody>
</table>
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**
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:15-10:25</td>
<td>The molecular mechanism of NGF-induced mechanical hyperalgesia</td>
<td>Vincenzo Prato (SFB 1158, Project A01)</td>
</tr>
<tr>
<td>10:25-10:35</td>
<td>Distal symmetric diabetic polyneuropathy structural nerve remodeling differs between diabetes type I and II: an in vivo study using MRI neurography</td>
<td>Johann Jende (SFB 1158, Project A03)</td>
</tr>
<tr>
<td>10:35-10:45</td>
<td>Interaction of nociceptive and non-nociceptive afferents within the spinal trigeminal nucleus</td>
<td>Margot Maurer (SFB 1158, Project A04)</td>
</tr>
<tr>
<td>10:45-10:55</td>
<td>Elucidating new axonal regenerative pathways for clinical intervention following spinal cord injury</td>
<td>Radhika Puttagunta (SFB 1158, Project A06)</td>
</tr>
<tr>
<td>10:55-11:05</td>
<td>Low back pain model in mice and the impact of stress</td>
<td>Carmen La Porta (SFB 1158, Project S01)</td>
</tr>
<tr>
<td>11:05-11:45</td>
<td>Coffee break</td>
<td></td>
</tr>
</tbody>
</table>

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)