Les Diablerets, Switzerland
August 29-30, 2014

Organizing Committee:
Paola Bezzi, Bogdan Draganski, Paul Franken, Lorenz Hirt, Jean-Pierre Hornung
(UNIL/CHUV)

Students’ Committee:
Jacques Anken, Marie-Laure Bielser, Ximena Castillo, Christine Fülling, Sandrine Muller, David Perruchoud

Coordination: Paula Gonzalez-Rubio and Ulrike Toepel
Friday, August 29- Morning Session

Chair: Jean-Pierre Hornung and Lorenz Hirt

09:08 - Train arrives at Les Diablerets
09:15-09:45 - Registration & coffee
09:45-10:10 - Opening remarks

10:10-11:00 - PLENARY LECTURE
   Víctor Borrell Franco (Institute for Neurosciences, University of Alicante, Spain)
   “Evo-devo mechanisms of brain origami”

11:00-11:20 - Coffee break

11:20-12:30 - SHORT TALKS by Lemanic PhD students (10min each*)
   - Timea Bodogan (#50)
   - Ilaria Vitali (#47)
   - Nicolas Hurni (#42)
   - Alberto Corcoba (#78)
   - Cyril Mikhail (#60)
   - Anne-Marie Lüchtenborg (#66)

12:30-13:00 - TALKS by Lemanic PI’s
   Johannes Gräff (EPFL)
   “Learning to forget: Using epigenetic memory aids to attenuate remote fear memories”

13:00-14:00 - Lunch

* Abstract numbers as in separate LNAM abstract book
Friday, August 29 - Afternoon Session

Chair: Paola Bezzi and Paul Franken

14:00-15:10  **SHORT TALKS by Lemanic PhD students** (10min each*)
- Sara Lorio (#39)
- Anne Ruef (#82)
- Mylène Bolmont (#33)
- Guillaume Sierro (#101)
- Abbas Khani (#38)
- Jean Terrier (#64)
- Ximena Castillo (#70)

15:10-15:40  **TALKS by Lemanic PIs**
Camilla Bellone (UNIL)
“Down-regulation of Shank3 in the VTA: modelling an autistic dopamine system”

15:40-16:15  Coffee break

16:15-17:15  **SHORT TALKS by Lemanic PhD students** (10min each*)
- Shanaz Diessler (#13)
- Vasileos Kechegias (#67)
- Layane Hanna-El-Daher (#62)
- Alexandre Pinault (#54)
- Christine Fülling (#26)
- Daniella Dwir (#71)

17:15-19:15  **Poster session & Apéro**
- 17:15 - Odd, black numbers
- 18:15- Even, red numbers

20:00-22:00  Dinner at the Hotel Victoria
22:00-...  Party at your favourite bar in town

* Abstract numbers as in separate LNAM abstract book

*Trains leave Les Diablerets at 19:04, 20:47 and 21:47*
Saturday, August 30

**Chairs:** Anthony Holtmaat, Jean-Pierre Hornung and Bogdan Draganski

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-10:00</td>
<td>Doctoral School Consultation</td>
</tr>
<tr>
<td></td>
<td>• Time for questions on courses etc.</td>
</tr>
<tr>
<td>10:00-10:50</td>
<td><strong>PLENARY LECTURE</strong></td>
</tr>
<tr>
<td></td>
<td>Kerstin Preuschoff (Laboratory of Computational Neuroscience, EPFL;</td>
</tr>
<tr>
<td></td>
<td>Geneva Finance Research Institute &amp; Swiss Center for Affective Sciences,</td>
</tr>
<tr>
<td></td>
<td>University of Geneva)</td>
</tr>
<tr>
<td></td>
<td>&quot;Identifying neural networks of choice under uncertainty&quot;</td>
</tr>
<tr>
<td>10:50-11:15</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:15-12:15</td>
<td><strong>SHORT TALKS by Lemanic PhD students</strong> (10min each*)</td>
</tr>
<tr>
<td></td>
<td>• Daniel Lebrecht (#91)</td>
</tr>
<tr>
<td></td>
<td>• Valerie Zufferey (#36)</td>
</tr>
<tr>
<td></td>
<td>• Lukasz Grzeczkowski (#17)</td>
</tr>
<tr>
<td></td>
<td>• Jui-Lin Fan (#104)</td>
</tr>
<tr>
<td></td>
<td>• Paul Vaucher (#15)</td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>Amicitia Excellence Prize</td>
</tr>
<tr>
<td>12:30-12:45</td>
<td>Presentation of the <strong>Jean Falk-Vairant</strong> foundation</td>
</tr>
<tr>
<td>12:45-13:15</td>
<td><strong>Poster prizes</strong></td>
</tr>
<tr>
<td></td>
<td>• For the best basic and the best clinical neuroscience poster or</td>
</tr>
<tr>
<td></td>
<td>presentation (awarded by the Jean Falk-Vairant foundation)</td>
</tr>
<tr>
<td></td>
<td>• Rewarding a poster displaying experimental design and quantitative</td>
</tr>
<tr>
<td></td>
<td>analysis of outstanding quality, including biostatistics (sponsored</td>
</tr>
<tr>
<td></td>
<td>by Biotelligences).</td>
</tr>
<tr>
<td>13:15-15:00</td>
<td>BBQ Lunch</td>
</tr>
<tr>
<td>15:00-</td>
<td><strong>Social Activities:</strong> volleyball, hike etc.</td>
</tr>
</tbody>
</table>

* Abstract numbers as in separate LNAM abstract book

Radial glial cells play key roles during cerebral cortex development, as primary stem and progenitor cells giving rise — directly or indirectly — to neurons and glia, but also acting as scaffold for the cerebral cortex architecture and migrating neurons. Recent work led to the discovery of novel types of radial glial cells with key roles in gyrification, the folding of the mammalian cerebral cortex in phylogeny and ontogeny. I will summarize the cellular and molecular basis of this fascinating process allowing the expansion of the mammalian cerebral cortex with all its functional consequences.
Johannes Gräff (EPFL)

**Learning to forget: Using epigenetic memory aids to attenuate remote fear memories**

Remembrances of traumata range among the most enduring forms of memories. Despite the elevated lifetime prevalence of anxiety disorders, effective strategies to attenuate long-term traumatic memories are scarce. The most efficacious treatments to diminish recent (i.e., day-old) traumata capitalize on memory updating mechanisms during reconsolidation that are initiated upon memory recall. Here, we show that in mice successful reconsolidation-updating paradigms for recent memories fail to attenuate remote (i.e., month-old) ones. We find that whereas recent memory recall induces a limited period of hippocampal neuroplasticity mediated, in part, by S-nitrosylation of HDAC2 and histone acetylation, such plasticity is absent for remote memories. However, by using an HDAC2-targeting inhibitor (HDACi) during reconsolidation, even remote memories can be persistently attenuated. This intervention epigenetically primes the expression of neuroplasticity-related genes, which is accompanied by higher metabolic, synaptic and structural plasticity. Thus, applying HDACis during memory reconsolidation might constitute a treatment option for remote traumata.
Postnatal periods of development are characterized by rapid changes in neuronal networks, providing critical periods in which environmental experiences can lead to long-term changes in brain and behaviours. In the Ventral Tegmental Area (VTA), postnatal maturation of excitatory transmission is regulated by mGluR1, which orchestrates both the subunit composition of AMPARs and NMDARs. However, the molecular mechanisms underlying such postnatal maturation remain elusive. Shank3 is a scaffolding protein of the postsynaptic density that links group I mGluRs to NMDARs and AMPARs through its interaction with Homer proteins. Interestingly, Autism-associate Shank3 down-regulation in the VTA disrupts the postnatal maturation of glutamatergic transmission onto dopamine neurons and alters their activity. Our data for the first time suggest a role of VTA in autistic phenotype and provide a novel circuit substrate for autism pathophysiology.
PLENARY LECTURE (Saturday, August 30, 10:00-10:50)

Kerstin Preuschoff
(Laboratory of Computational Neuroscience, EPFL; Geneva Finance Research Institute & Swiss Center for Affective Sciences, University of Geneva)

"Identifying neural networks of choice under uncertainty"