

# Summer School Program

## The societal burden of chronic pain: neural circuits, mechanisms and new therapeutic avenues

**Date:** January 8<sup>th</sup> - 12<sup>th</sup>, 2018

**Venue:** Heidelberg Center Latin America, Santiago de Chile

### Monday, January 8<sup>th</sup>, 2018

- 08:30 - 09:00**      **Registration**
- 09:00 – 09:30**      **Orientation talk – Rohini Kuner**
- 09:30 – 11:00**      **REFRESHER COURSE: BASIC CIRCUIT MODULE - I**
- 09:30 – 10:15**      **Jan Siemens**, Heidelberg University, Germany: *Sensory neurons and pain*
- 10:15 – 11:00**      **Marucia Chacur**, University of Sao Paulo, Brazil: *Spinal circuits of pain*
- 11:00 – 11:30**      Coffee break and registration for workshops
- 11:30 – 13:00**      **REFRESHER COURSE: NEUROBIOLOGY MODULE**
- 11:30 – 12:15**      **Rohini Kuner**, Heidelberg University, Germany: *Neurobiology of pain.*
- 12:15 – 13:00**      **Michael Salter**, University of Toronto, Canada: *Glial signaling mediators*
- 13:00 – 14:30**      Lunch and registration for workshops, final registration for social activity
- 14:30 – 16:00**      **REFRESHER COURSE: CLINICAL PAIN SYNDROMES MODULE**
- 14:30 – 15:15**      **Rolf-Detlef Treede**, Heidelberg University, Germany: *Neuropathic pain*
- 15:15 – 16:00**      **Anke Tappe-Theodor**, Heidelberg University, Germany: *Animal models of pain*
- 16:00 – 16:30**      Coffee break and registration for workshops, free time
- 19:00 – 20:30**      **REFRESHER COURSE: BASIC CIRCUIT MODULE - II**
- 19:00 – 19:45**      **Herta Flor**, Central Institute of Mental Health, Mannheim, Germany: *Psychological factors in chronic pain*
- 19:45 – 20:30**      **Karen Davis**, University of Toronto, Canada: *Functional and structural brain imaging methods to study pain*
- 20:30 – 21:30**      Dinner

## Tuesday, January 9th, 2018

<b>09:00 – 11:30</b>	<b>MORNING RESEARCH LECTURES</b>
<b>09:00 – 09:30</b>	<b>Michael Salter</b> , University of Toronto, Canada: <i>Sex, pain and microglia</i>
<b>09:30 – 10:00</b>	<b>Yves De Koninck</b> , Laval University, Quebec, Canada: <i>Chronic pain: when you need to worry about the chloride tap</i>
<b>10:00 – 10:30</b>	Coffee break
<b>10:30 – 11:00</b>	<b>Thomas Kuner</b> , Heidelberg University, Germany: <i>Neuronal structural plasticity in chronic pain</i>
<b>11:00 – 11:30</b>	<b>Trainee presentations</b>
	<b>Microglia, spinal mechanisms:</b> Rangel Silva, Trinidad Mariqueo
<b>11:30 – 11:45</b>	Distribution of lunch packets
<b>11:45 – 12:00</b>	Boarding in the bus for the mountain trip-Cajon del Maipo
<b>12:00</b>	Departure
<b>13:45</b>	Arrival at Cajon del Maipo
<b>14:00 – 17:00</b>	Start of pre-selected activity (duration depends on the chosen activity)
<b>18:00 – 20:00</b>	Dinner at a restaurant near mountains
<b>20:00</b>	Departure to Santiago de Chile
<b>22:00</b>	Arrival at Santiago de Chile

## Wednesday, January 10th, 2018

09:00 – 10:00

### MORNING RESEARCH LECTURES

09:00 – 09:30

**Mario Campero**, Universidad de Chile, Chile: *Mechanisms of neuropathic pain in humans*

09:30 – 10:00

**Rolf-Detlef Treede**, Heidelberg University, Germany: *Spinal latent sensitization to input from muscle as a model of nonspecific low-back pain*

10:00 – 10:30

Coffee break

10:30 – 12:30

### Trainee presentations

#### Peripheral ion channels and spinal mediators:

Boris Lavanderos, Rodrigo Sandoval, Francina Agosti, Rafaela Mano Guimarães, Andreza Urba de Quadros

**Clinical analysis:** Rodrigo Melo Conde, Alejandra Escobar

12:30 – 14:00

Lunch

14:00 – 15:30

### Parallel methods workshops

**Ulf Baumgärtner**, Heidelberg University, **Margarita Calvo**, Pontificia Universidad Católica de Chile: *Human QST workshop*

**Katrin Schrenk-Siemens**, Heidelberg University: *Human iPSC and human ES-cell derived nociceptors*

15:30 onwards

Free time // Coffee break

18:00 – 19:00

### EVENING RESEARCH LECTURES

18:00 – 18:30

**Jan Siemens**, Heidelberg University, Germany: *Modulation of pain signals: GABA and other metabolites*

18:30 – 19:00

**Rohini Kuner**, Heidelberg University, Germany: *Cortical circuits and rhythms in pain*

19:00 – 19:30

### Trainee presentations

**Pain and the brain:** Paul Naser, Jiaojiao Zhang

19:30 – 19:40

Break and rearrangement of groups

19:40 – 20:40

Exercise in research planning, 4 parallel sessions, moderated by faculty

20:40 – 21:40

Dinner

Thursday, January 11th, 2018

09:00 – 10:00

**MORNING RESEARCH LECTURES**

09:00 – 09:30

**Karen Davis**, University of Toronto, Canada: *The dynamic pain connectome: a model to understand individual pain sensitivity and coping in health and chronic pain*

09:30 – 10:00

**Herta Flor**, Heidelberg University, Germany: *Phantom pain and reorganization*

10:00 – 10:15

Distribution of lunch packets

10:15 – 10:30

Boarding in the bus for trip to Valparaiso beach

12:30

Arrival at the beach

12:30 – 14:00

Caleta Portales // Beach // Lunch

14:00 – 17:00

City tour

18:00 – 20:00

Dinner in Vina del Mar, Restaurant Tierra de Fuego

20:00

Departure to Santiago de Chile

22:00

Arrival at Santiago de Chile

Friday, January 12th, 2018

09:00 – 10:00

**MORNING RESEARCH LECTURES**

09:00 – 09:30

**Roberto Guiloff**, Imperial College London, UK: *Treatment of neuropathic pain: An update for clinicians*

09:30 – 10:00

**Margarita Calvo**, Pontificia Universidad Católica de Chile, Chile: *New target for treatment in neuropathic pain*

10:00 – 10:30

Coffee break

10:30 – 11:00

**Marucia Chacur**, University of Sao Paulo, Brazil: *No pharmacological therapies for pain treatment*

11.00- 12:30

**Trainee presentations:**

**Preclinical development of clinical approaches:** Chary Ely, Nicole Silva, Victória Oliveira, Lilalea Franca, Heloísa Alonso Matiello, Luis Martin Gonzalez Gomez

12:30 – 14:00

Lunch

14:00 – 15:30

**Parallel methods workshops**

**Linette Tan**, Heidelberg University: *Methods of optogenetics*

**Ulf Baumgärtner**, Heidelberg University: *Human electrophysiology, MEG and fMRI*

15:30 onwards

Free time/Coffee break

19:00 – 19:30

**EVENING RESEARCH LECTURE**

19:00 – 19:30

**Jimmy S. Libermann**, Universidad Andrés Bello, Chile: *The role of the insula in pain, anxiety and pain-associated depression*

19:30 – 20:00

**Trainee presentations**

**Pain and affect:** Titilola Akintola, Gonzalo Gutierrez Muñoz

20:00 – 21:30

Dinner, end of school activities