



## International Workshop on Chronic Pain and Itch: Mechanisms and Circuits



### **Final Program (11/10/2021)**

#### **Wednesday, October 20<sup>th</sup>**

**10:00-13:45** Registration open for participants

Complejo San Juan c/ Dr. Perez Mateos s.n., San Juan de Alicante

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#### **13:45-14:00 Welcome address**

Félix Viana, Asia Fernández Carvajal, Guillaume Sandoz

#### **14:00-18:15 1<sup>st</sup> SESSION. ADVANCED OPTICAL TECHNIQUES IN NEUROSCIENCE**

##### **Chair**

Ana Gomis. Instituto de Neurociencias (Alicante, Spain)

##### **Speakers**

Felix Leroy. Instituto de Neurociencias (Alicante, Spain) **14:00-14:45**

*Optogenetic, chemogenetic and calcium imaging tools to investigate neuronal circuits supporting social behavior*

Guillaume Sandoz. Université Cote d'Azur (Nice, France) **14:45-15:30**

*LAKI-1 a Light-Activated K<sup>+</sup> channel inhibitor to study migraine induction*

Julius Pakalnikis. SISSA (Trieste, Italy) **15:30-16:00**

*Development of new voltage imaging tools for monitoring neuronal activity*

#### **16:00-16:30 Coffee Break**

Joshua Levitz. Weil Cornell (New York, USA) **16:30-17:15 (Zoom in)**

*Harnessing GPCR photopharmacology to study in vivo neuromodulation*

Victoria Abaira. Rutgers University (New Jersey, USA) **17:15-18:00 (Zoom in)**

*Does this hurt? Computational approaches to scale the rodent pain experience*

Manuela Schmidt. University of Vienna (Vienna, Austria) **15:00-15:30 (Zoom in)**

*A protein fingerprint of chronic pain – new insights from proteome-based systems biology*

Giovanna De Filippi. Axion BioSystems (Atlanta, GA - USA). **18:30-18:45**

*Modelling pain with rodent and hiPSCs models in-a-dish with Axion BioSystems bioelectronic assays*

Nicolas Bonneau, Inscopix, Inc. (Palo Alto, CA, USA) **18:45-19:00**

*In vivo miniature microscopy to accelerate your neuroscience research*

## **Thursday October 21<sup>st</sup>**

**8:30-10:00** Registration open for participants at Complejo San Juan

### **9:00-11:00 2<sup>nd</sup> SESSION. MECHANICAL/PERIPHERAL PAIN MECHANISMS**

#### **Chair**

Francisco Taberner. Instituto de Neurociencias (Alicante, Spain)

#### **Speakers**

Tim Hucho. University of Cologne (Cologne, Germany) **9:00-9:30**

*Electrical activity induces PKA-dependent nociceptor sensitization via L-type channels*

Gerard Callejo. Universidad de Barcelona (Barcelona, Spain) **9:30-10:00**

*Mechanisms driving joint inflammatory pain in mice*

Aziz Moqrich. IBDM CNRS (Marseille, France) **10:00-10:30**

*A role of the C-LTMRs-derived TFA4 in pain modulation*

Saad Nagi. Linköping University (Linköping, Sweden) **10:30-11:00**

*Speed matters. Investigations into a novel pain pathway in humans*

**11:00-11:30** [Coffee Break](#)

### **11:30-14:00 3<sup>rd</sup> SESSION. MECHANISMS OF CHRONIC PAIN AND ITCH**

#### **Chair**

David Hughes. University of Glasgow (Glasgow, UK)

#### **Speakers**

Augusto Escalante. Instituto de Neurociencias (Alicante, Spain) **11:30-12:00**

*Spinal inhibitory control of self-generated itch*

Xavier Gasull. Universidad de Barcelona (Barcelona, Spain) **12:00-12:30**

*Modulation of pain and itch sensitivity by background K<sup>+</sup> channels*

Andreas Leffler. Hannover Medical School (Hannover, Germany) **12:30-13:00**

*More than just a sensor for non-physiological high heat - new insights about TRPV2 and possible implications for pain and itch*

Juan Carlos Arévalo. Universidad de Salamanca (Salamanca, Spain) **13:00-13:30**

*ARMS/Kidins220 regulates NGF/TrkA axis-mediated nociception through BDNF secretion*

Katie Barker. University of Cambridge (United Kingdom) **13:30-13:45**

*TNF $\alpha$  sensitises colonic afferent responses to capsaicin and noxious distension through modulation of TRPV1 and p38MAPK signalling pathways*

Simona Giorgi. IDIBE-UMH (Elche, Spain) **13:45-14:00**

*Transdifferentiation and microfluidic chambers as tools to approach the in-vivo sketch of human nociceptors*

**14:00-15:30** [Standing lunch and visit to posters](#)

**15:30-18:15 4<sup>th</sup> SESSION. CHEMOTHERAPY-RELATED PAIN / NEUROIMMUNE INTERACTIONS**

**Chair**

Dr. Xavier Gasull. Universidad de Barcelona (Barcelona)

**Speakers**

Mathilde Israel. King`s College London (London, UK) **15:30-16:00**

*Oxaliplatin evoked hyperexcitability*

Elvira de la Peña. Instituto de Neurociencias (Alicante, Spain) **16:00-16:30**

*The role of TRPA1 channels and Sigma-1 receptor in oxaliplatin-induced peripheral neuropathy*

Margot Maurer. Wolfson CARD, King`s College London (United Kingdom) **16:30-17:00**

*Immune contribution to fibromyalgia: the role of immunoglobulin G*

Eva M<sup>a</sup> Villalba. IDIBE-UMH (Elche, Spain) **17:00-17:15**

*Sensitizing effects of chemotherapeutic agents on sensory neurons: long-term culture studies*

Javier Aguilera-Lizarraga. KU Leuven Department of Chronic Diseases, Metabolism and Ageing (Belgium) **17:15-17:30**

*Neuro-immune interaction underlying food-induced abdominal pain*

Sathish Kumar Singaravelu. Dept. of Neurophysiology, Heidelberg Uni. (Germany) **17:30-17:45**

*Microglia contributes to long-term sensitization of rat spinal neurons induced by a mild-nociceptive lumbar input when preceded by adolescent restraint stress*

Minji Ai. Department of Veterinary Medicine, University of Cambridge (UK) **17:45-18:00**

*Human mesenchymal stem/stromal cells and derived extracellular vesicles reduce pain in 16-week DMM mice*

Hanneke Willemen. UMC Utrecht (Utrecht, Netherlands) **18:00-18:15**

*Mitochondrial adaptations in sensory neurons regulate the switch from acute to chronic pain.*

**18:15-18:30** [Short Coffee Break](#)

**18:30-19:30 PLENARY LECTURE (Zoom out)**

Dr. Paul Heppenstall, SISSA, (Trieste, Italy)

**Title: *Optopharmacological methods to dissect peripheral pain and itch circuits***

## **Friday October 22<sup>nd</sup>**

### **9:00-12:30 5<sup>th</sup> SESSION. TRIGEMINAL PAIN AND MIGRAINE & Short Presentations**

#### **Chair**

Dr. Asia Fernández-Carvajal. IDIBE-UMH (Elche, Spain)

#### **Speakers**

Jorge Fernández-Trillo. Instituto de Neurociencias UMH-CSIC (Alicante, Spain) **9:00-9:30**  
*Role of Piezo2 channels in mechanical ocular pain*

Carolina Roza. Universidad de Alcalá de Henares (Alcalá, Spain) **9:30-10:00**  
*The cold sensing mechanism in tooth nociceptors*

Boris Safronov. IBMC University of Porto (Porto, Portugal) **10:00-10:30**  
*Processing of trigeminocervical nociceptive afferent input by neuronal circuitry in the upper cervical lamina I*

Carlos Belmonte. Instituto de Neurociencias UMH-CSIC (Alicante, Spain) **10:30-11:00**  
*Corneal sensory detection: Learning on general questions from a very peculiar structure*

**11:00-11:30** [Coffee break](#)

Guillaume Sandoz, Universite Cote d'Azur (Nice, France) **11:30-12:00**  
*K2P channel in migraine and in its treatment*

Maya Dannavi. Department of Pharmacology, University of Cambridge (UK) **12:00-12:15**  
*Role of Prdm12 in somatosensory development and nociception: From development till adulthood*

James Higham. University of Cambridge (United Kingdom) **12:15-12:30**  
*Angiotensin II stimulates colonic afferents and cultured sensory neurons with a nociceptor-like phenotype via the AT1 receptor*

### **12:30-13:30 PLENARY LECTURE (**Zoom out**)**

Dr. Rohini Kuner, University of Heidelberg (Heidelberg, Germany)

**Title: *Sumoylation in sensory neurons regulates neuropathy and pain***

**13:30-15:00** [Standing lunch and visit to posters](#)

## 15:00-18:30 6<sup>th</sup> SESION. CHRONIC PAIN: MECHANISMS and CIRCUITS

### Chair

Guillaume Sandoz, Université Cote d'Azur (Nice, France)

### Speakers

Thomas Voets. KULeuven (Leuven, Belgium) **15:00-15:30**

*TRPM3 – a hotheaded channel on steroids involved in chronic pain*

David Hughes. University of Glasgow (Glasgow, UK) **15:30-16:00**

*Presynaptic inhibition: the overlooked player in neuropathic pain*

José Antonio López García. Universidad de Alcalá de Henares (Alcalá, Spain) **16:00-16:30**

*Spinal cord circuits modulating primary afferent depolarization*

Emmanuel Bourinet. Institut de Génomique Fonctionnelle (Montpellier, France) **16:30-17:00**

*Channeling affective touch and pain*

Cedric Peirs, Neuro-Dol, Université Clermont Augverne (Clermont-Ferrand, France) **17:00-17:30**

*Pain in the dorsal horn: network or circuits?*

James Poulet, Max Delbrück Center - MDC (Berlin, Germany) **17:30-18:00**

*Cortical circuits of thermal perception*

**18:00-18:15** Short Break

**18:15-18:25** Prizes for best poster and best short talk

**18:25-18:45** Meeting closure

**20:15** Bus departs Complejo San Juan to the Port of Alicante

**20:30** Gala dinner party for signed participants at the Port of Alicante

Ocean Race Club Volvo Restaurant

MUELLE DE LEVANTE, 10 (ALICANTE)

**23:45** Bus departs from the Port of Alicante to Complejo San Juan

