

33rd Ion Channels Meeting PROGRAM

Sunday, September 8th 2024

16:00 – 19:00 Welcome of the meeting attendees

19:00 *Welcome drink and Dinner*

21:00 Plenary lecture: Annette Dolphin (UK)

“Drugs and trafficking: lessons from calcium channels”

Monday, September 9th 2024

08:15 Opening session and 1-minute oral presentation for sponsors

08:30 Symposium 1: Techniques for studying ion channels and their environment

Organized by Jérôme Thireau (Montpellier, France)

Laetitia Mony (France)

“Combined approaches to reveal surprising role of ionic channels in the brain”

Scott Hansen (USA)

“Techniques to study membrane mediated mechanisms of disease. Role of lipids”

Lucie Bergdoll (France)

“Lipid composition of the membrane governs the oligomeric organization of VDAC1”

Selected speaker: Eleonora Centonze (Switzerland)

“Probing protonation-driven conformational changes in the ASIC1a β -turn domain through fluorescence measurements”

10:15 *Coffee break*

10:40 Oral communication session 1: Ion Channels in Neuronal Function: From Molecular Mechanisms to Therapeutic Innovation

Organized by Cécile Hilaire (Montpellier, France)

Youssef Issa (France)

“Identification of specific molecular markers of ALS vulnerable motoneurons”

Laurent Ferron (Canada):

“Presynaptic remodeling of voltage-gated Ca²⁺ channels in central terminals of Trpv1 nociceptors during chronic pain”

Yusra El Ghaleb (Austria):

“Disease variants in the activation gate and VSDs of T-type calcium channel Cav3.3 linked to neurodevelopmental disorders and epilepsy”

Leos Cmarko (France):

“Pharmacological screen of new therapeutically relevant calcium channel modulators”

11:40 1-minute oral presentation for posters (even numbers)

12:30 Lunch

14:00 Poster session 1

15:45 Coffee break

16:00 Symposium 2: “Ion channels and cancer”

Organized by Loïc Lemonnier (Lille, France)

Sébastien Roger (France):

“Role of P2X4 receptor in aggressive properties of mammary cancer cells: invasiveness, autophagy and release of extracellular vesicles”

Barbara Ehrlich (USA):

“From Basic Science to Clinical Trials: Lessons from Chemotherapy”

Rainer Schindl (Austria):

“Structural analysis of patho-physiological STIM1 mutants”

Selected speaker: Mathilde Fourgeaud (France):

“Impact of TRPM7 channel on pancreatic stellate cell activation induced by cadmium exposure.”

17:45 - 18:45 Oral communication session 2: "From toxicity to therapeutical involvement of ion channels "

Organized by Alban Girault (Amiens, France)

Sara Kaaki (France):

"Comparative effects of neonicotinoids and newly introduced insecticides on human $\alpha 7$ and mammalian $\alpha 4\beta 2$ neuronal nicotinic acetylcholine receptors"

Chloë Radji (France) :

"How does benzalkonium chloride affect ion and water channels in human corneal epithelial cells?"

Marc Bohnet (Switzerland):

"Impact of calcium on the pain-sensing ion channel hASIC3"

Romain BAUDAT (France)

"Mambalgin-ASIC1a, a novel complex to detect non-small cell lung cancer"

18:45 - 19:15 Sponsors presentations

19:30 Apéritif dinatoire Sétois

Tuesday, September 10th 2024

08:30 Symposium 3: "Channelopathies at preclinical - modeling channelopathies"

Organized by Adèle Faucherre (Montpellier, France)

Dominique Glauser (Switzerland)

"Computer-assisted behavioral phenotyping in *C. elegans* as a tool to study channel function and dysfunction"

Carol Ann Remme (the Netherlands):

"SCN5A channelopathies: arrhythmia, cardiomyopathy, and beyond the cardiomyocyte"

Nadine Ortner (Austria):

"Cav1.3 variants: from molecular mechanisms to therapeutic approaches"

Selected speaker: Shi-Bing Yang (Taiwan):

"Beyond Membrane Excitability: Gain-of-function KATP Channel Mutant Causes Permanent Neonatal Diabetes via Suppressing Beta Cell Proliferation"

10:15 Coffee break

10:30 - 11: 00 1-minute oral presentation for posters (odd numbers)

11:00 - 12:30 Poster Session 2

12:30 Lunch

13:30 Appointment for Social event

17:15 Symposium 4: “Channelopathies at molecular - from structure to pharmacology”

Organized by Philippe Lory (Montpellier, France)

Barbara Ribeiro (France):

“Functional characterization of KCNH2 genetic variants, encoding hERG potassium channel, as a clinically-relevant information for type 2 LQTS syndrome”

Henry Colecraft (USA):

“Hacking the ubiquitin code to control ion channel expression for therapy”

Jean-François Desaphy (Italia):

“Mutation-driven precision medicine in non-dystrophic myotonias”

Selected speaker: Lamia Goual (France):

“Modelling the neurocardiac junction in Long QT Syndrome type 2”

19:00 Annual meeting of the Association

20:00 Dinner

22:00 Evening Party

Jean-Yves Le Guennec (France): “Bloody numbers”

Wednesday, September 11th 2024

09:30 Symposium 5: “Glutamate receptors: trafficking, turnover, plasticity, agonists”

Organized by Vincent Seutin (Liège, Belgium)

Aude Panatier (France):

“Astrocytic EphB3 receptors control NMDAR functions and memory

Mark Farrant (UK):

“AMPA receptor function and dysfunction: the role GluA2 subunits”

Nelson Rebola (France):

“Contribution of NMDA receptors to the functional diversity of neocortical interneurons”

Selected speaker: Sofian Ringlet (Belgium):

“Co-agonist glycine controls the occurrence of bursts by activating extrasynaptic NMDARs in nigral dopamine neurons”

11:15 Coffee break

11:40 Prizes and Meeting closure

12:00 Lunch

14:00 Airport shuttle departure