

## 25<sup>th</sup> Meeting of the French Society of Toxinology (SFET) "Toxins and health: from molecules to organisms" November 28<sup>th</sup>-29<sup>th</sup>, 2018, Institut Pasteur, Paris, France



## Wednesday 28th November

9h00 - 9h10: Welcome. Evelyne BENOIT (SFET President)

9h10 – 11h30 Session 1 | Strategies for screening toxins

Chairpersons: Pascale MARCHOT & Nicolas GILLES

**9h10 – 9h40: Jeroen KOOL** (Amsterdam Institute for Molecules Medicines and Systems, Amsterdam, The Netherlands) *Analytics for assessing venom coagulopathy and neurotoxicity* 

**9h40 – 10h10: Jean-Marie CHAMBARD** (Sanofi R&D, Integrated Drug Discovery – High Content Biology, Vitry-sur-Seine, France)

Venoms in Drug Discovery: A case study on voltage-gated channels

10h10 - 10h40: Coffee break & Posters

**10h40 – 11h10: Nicolas GILLES** (SIMOPRO, CEA de Saclay, Gif-sur-Yvette, France) How to turn the complexity of venoms into an HTS-compatible toxin bank

**11h10 – 11h30: Kévin PROLA** (Université de Strasbourg, Institut de Bactériologie, Strasbourg. France) Characterization of a potential virulence factor zinc metallopeptidase produced by Staphylococcus lugdunensis

**11h30 – 11h40: Sponsor presentation** (domiconus: 1<sup>st</sup> European Conidae venom library for pharmaceutical research)

**11h40 – 12h15:** Posters as 3-min highlights (*limited to 12 posters*)

12h15 - 12h30: Group photo

12h30 - 14h30: Lunch & Posters

14h30 – 17h00 Session 2 | Toxin-induced pathologies

Chairpersons: Michel POPOFF & Gilles PRÉVOST

**14h30 – 15h00: Kim ROELANTS** (Amphibian Evolution Lab, Vrije Universiteit Brussel, Elsene, Belgium) *Poison from a frog's perspective: Tracing the evolution and adaptive roles of anuran antimicrobial peptides* 

**15h00 – 15h30: Pal STENMARK** (Department of Biochemistry and Biophysics, Stockholm University, Stockholm, Sweden) *The clostridial neurotoxins, a growing family* 

15h30 – 16h00: Gabriella VIERO (Institute of Biophysics, CNR Unit, Trento, Italy)

A host IncRNAs protects human cells from bacterial infection and aids against infection by associating with polysomes

**16h00 – 16h20: Horst POSTHAUS** (Institute of Animal Pathology, Department of Infectious Diseases and Pathobiology, Vetsuisse-Faculty, University of Bern, Switzerland)

New insights into the role of beta-toxin in Clostridium perfringens type C enteritis

**16h20 – 16h40: Geoffrey MASUYER** (Department of Biochemistry and Biophysics, Stockholm University, Stockholm, Sweden)

The structure of the tetanus toxin reveals pH-mediated domain dynamics

16h40 – 17h00: Christian LEGROS (Institut MITOVASC, Université d'Angers, Angers, France)

Activation of Na<sub>V</sub> channels with neurotoxins reveals a cross-talk between Na<sub>V</sub>1.3, L-type Ca<sub>V</sub> channels and Na<sup>+</sup>/Ca<sup>2+</sup> exchanger in GH3b6 cells

17h00 – 19h00: General Assembly of the SFET (SFET members)

## Thursday 29<sup>th</sup> November

9h00 - 11h40

Session 3 | Toxins as therapeutics

Chairpersons: Grazyna FAURE & Denis SERVENT

9h00 – 9h30: Christian GRUBER (Center for Physiology and Pharmacology, Medical University of Vienna, Austria) Plant cystine-knot peptide toxins as pharmacological research tools and therapeutic drug candidates

9h30 – 10h00: Antonio VILLAVERDE (Institut de Biotecnologia i de Biomedicina, Universitat Autònoma de Barcelona, Spain) Engineering protein toxins as self-assembling, self-delivered antitumoral drugs

**10h00 – 10h20: Johannes KRUPP** (Ipsen Innovation, Les Ulis, France)

Increased affinity of engineered botulinum neurotoxin B to its human receptors translates into increased clinical potential

10h20 - 10h40: Coffee break & Posters

10h40 - 11h00: Julien GIRIBALDI (Institut des Biomolécules Max Mousseron, Université de Montpellier - CNRS, Montpellier, France)

Backbone cyclization of native  $\alpha$ -conotoxin CIA dramatically increases affinity at neuronal nicotinic receptors

11h00 – 11h20: Grazyna FAURE (Unité Récepteurs-Canaux, Institut Pasteur, Paris, France)

Potential applications of snake venom PLA2 toxins for drug design

11h20 – 11h40: Jérome MONTENACH (Institut du Thorax, Nantes, France)

High-throughput automated patch-clamp: Modulation of  $\alpha$ C-conotoxin pharmacology by aptamers

11h40 – 12h00: Ceremony for best poster and other awards

12h00 - 14h00: Lunch & Posters

14h00 - 16h20

Session 4 | Miscellaneous

Chairpersons: Evelyne BENOIT & Julien BARBIER

14h00 - 14h20: Marie-Yasmine DECHRAOUI BOTTEIN (Environment Laboratories, Department of Nuclear Science and Application, International Atomic Energy Agency, Monaco) Detection, toxicity and bioaccumulation of ciquatoxins in fish

14h20 – 14h40: Khadija DAOUDI (Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Casablanca, Morocco) Exhaustive characterization of Moroccan scorpion venoms by the new proteomic approach "Mass spectrometry"

14h40 – 15h00: Alexandre CHENAL (Structural Biology and Chemistry Department, Institut Pasteur, Paris, France) Structural flexibility of CyaA is crucial for its secretion, folding and host cell hijacking

15h00 – 15h20: Laure GUENIN-MACÉ (Unité d'Immunobiologie de l'Infection, Institut Pasteur, Paris, France) Mycolactone-mediated SEC61 blockade prevents inflammatory responses in the nervous system

15h20 – 15h40: Christine RASETTI-ESCARGUEIL (Microbiology Department, Institut Pasteur, Paris, France) Development of innovative BoNT antibodies and progress toward harmonization of the detection of BoNT toxins

15h40 – 16h00: Salma CHAKIR (Pasteur Institute of Morocco, Laboratory of Venoms and Toxins, Casablanca, Morocco) Comparative study of the histological changes induced by the venoms of Cerastes cerastes and Naja haje legionis

**16h00 – 16h20:** Waiting for oral communication

16h20 – 16h30: Closure. Evelyne BENOIT (SFET President)