

**XXXIII**  
**CONGRESO ANUAL**  
**SAN 2018**  
**CORDOBA –**  
**ARGENTINA**  
**24 AL 26 DE OCTUBRE**

# **PRE-CONGRESS COURSE “NEUROBIOLOGY OF DRUG ADDICTION”**

***SAN IBRO LARC Course and ISN Small Conference (ISN-CC) Associated to the XXXIII SAN 2018 Meeting***

*October 22nd -23rd, 2018*

*Ciudad Universitaria, Córdoba, Argentina*

## **ORGANIZER:**

Dr. Liliana M. Cancela. *IFEC-CONICET, Full Professor, Department of Pharmacology, School of Chemical Sciences, Universidad Nacional de Córdoba.*

## **COORDINATOR:**

Dr. Flavia Bollati. *IFEC-CONICET, Assistant Professor, Department of Pharmacology, School of Chemical Sciences, Universidad Nacional de Córdoba.*

## **COLABORATORS:**

Dr. Verónica Álvarez (USA)

Dr. María Estela Andrés (Chile)

Dr. Bruno Averbeck (USA)

Dr. Rudy Bernabeu (Argentina)

Dr. Martine Cador (Francia)

Dr. Peter W. Kalivas (USA)

Dr. Silvia Cruz (México)

Dr. Juan Carlos Molina (Argentina)

Dr. Gabriela Paglini (Argentina)

Dr. Mariela Pérez (Argentina)

Dr. Marcelo Rubinstein (Argentina)

Dr. Mirian Virgolini (Argentina)

## **LOCATIONS:**

-Salón Auditorio, Edificio Integrador, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba.

-Salón de Actos Pabellón Argentina, Ciudad Universitaria, Córdoba, Argentina

**WORKSHOP *Homage to Ricardo Miledi***  
**“Workshop: Past, Present and Beyond of Synaptic  
Transmission”**

*Previous and satellite activity of the XXXIII Annual Congress of the Argentine  
Society of Neuroscience Research – SAN*

October 22<sup>th</sup>- 23<sup>th</sup>, 2018 – Instituto Martín y Mercedes Ferreyra, Córdoba

**LOCATION:**

Instituto de Investigaciones Médicas  
Mercedes y Martín Ferreyra (INIMEC)  
Ciudad de Córdoba, República Argentina

**ORGANIZING COMMITTEE:**

Dr. Joaquín Piriz  
Dr. Juan D. Goutman  
Dr. Daniel J. Calvo  
Dr. Osvaldo Uchitel

**SPEAKERS:**

Piotr Bregestovski (France)  
Ataúlfo Martínez Torres (México)  
Carlos Matute (Spain)  
Ian Parker (USA)  
Angela Vincent (UK)  
Cecilia Bouzat (Argentina)  
Daniel J. Calvo (Argentina)  
Juan D. Goutman (Argentina)  
Antonia Marín-Burgin (Argentina)  
Osvaldo Uchitel (Argentina)

## Pre-Congress Activities

**Monday, October 22<sup>nd</sup>**

**09:00 – 18:00 PRE-CONGRESS COURSE** “Neurobiology of Drug Addiction” /  
*Auditorio Ciencias I Facultad de Ciencias Químicas – UNC*

**14:00 – 18:00 WORKSHOP** Ricardo Miledi / *Instituto de Investigación Médica M y M Ferreyra (INIMEC-CONICET-UNC)*

**Tuesday, October 23<sup>rd</sup>**

**09:00 – 18:00 PRE-CONGRESS COURSE** “Neurobiology of Drug Addiction” /  
*Auditorio Ciencias I Facultad de Ciencias Químicas – UNC*

**10:00 – 18:00 WORKSHOP** Ricardo Miledi / *Instituto de Investigación Médica M y M Ferreyra (INIMEC-CONICET-UNC)*

**14:00 – 18:00 REGISTRATION** / *Pabellón Argentina, UNC.*

**16:00 – 19:00 OPEN HOUSE: Neuroscience for Community** / *Salón de Actos. Pabellón Argentina*

# **XXXII Congress of the Argentine Society for Research in Neuroscience**

October 24<sup>th</sup>–26<sup>th</sup>, 2018

Pabellón Argentina, Ciudad Universitaria, UNC

## **COMISIÓN DIRECTIVA SAN**

**Dr. Mario Guido**, CIQUIBIC CONICET-Universidad Nacional de Córdoba  
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**Dr. Arturo Romano**, Instituto de Fisiología, Biología Molecular y Neurociencias,  
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**Gastón Calfa**, IFEC-CONICET. Departamento de Farmacología, Facultad de  
Ciencias Químicas, Universidad Nacional de Córdoba  
Vocal

**Estela Maris Muñoz**, IHEM-CONICET, Universidad Nacional de Cuyo  
Vocal

**Javier Ramos**, Instituto de Biología Celular y Neurociencia “Prof. E. De Robertis”,  
CONICET-UBA  
Vocal

## **COMISIÓN ORGANIZADORA SAN2018**

Dr. Mario E. Guido,  
CIQUIBIC CONICET-Universidad Nacional de Córdoba

Dra. Liliana Cancela,  
IFEC-CONICET, Universidad Nacional de Córdoba

Dra. Estela Muñoz,  
IHEM-CONICET, Universidad Nacional de Cuyo

Dr. Joaquín Piriz,  
IFIBIO, CONICET-UBA, Universidad de Buenos Aires

Dr. Jeremías Corradi,  
INIBIBB CONICET, Universidad Nacional del Sur, Bahía Blanca

Dra. Alicia Degano,  
CIQUIBIC CONICET-Universidad Nacional de Córdoba

Dr. Pablo Lopez,  
Instituto de Investigación Medica Mercedes y Martin Ferreyra, CONICET

# PROGRAM

## DAY 1 / Wednesday, October 24<sup>th</sup>

- 07:30 – 08:15** Registration  
**08:25 – 08:30** Welcome by Organizers  
**08:30 – 10:30** **SYMPOSIUM I / Room A**

### **“Neurobiology of drug addiction”**

**Chairs:** *Liliana M. Cancela; Marcelo Rubinstein*

### **Dissecting the roles of dopamine D2 receptors in the basal ganglia and motivated behaviors**

*Verónica Álvarez*

*Laboratory on Neurobiology of Compulsive Behaviors. National Institute on Alcohol Abuse and Alcoholism, USA*

### **Opiate withdrawal memories: Behavior and neural network**

*Martine Cador*

*Université Bordeaux, France*

### **Neural systems underlying reinforcement learning**

*Bruno Averbeck*

*Laboratory of Neuropsychology, NIMH/NIH, USA*

### **Using the Neurobiology of Willpower to Treat Drug Addiction**

*Peter W Kalivas*

*Medical University of South Carolina, USA.*

**10:30 – 11:00** Coffee Break

**11:00 – 12:00** **OPENING LECTURE / Room A**

### **Tubulin tyrosination-detyrosination cycle : key role in neuronal functions**

*Annie Andrieux,*

*Univ. Grenoble Alpes, France*

**12:30** Lunch with activities:

## **P123.-Neurorestorative and protective effects of palmitoylethanolamide in perinatal asphyxia: an analysis of the rat striatum**

Lucas Daniel Udovin<sup>1</sup>, Tamara Kobiek<sup>2</sup>, María I. Herrera<sup>2</sup>, Ana B. Ramos Hryb<sup>1</sup>, Nicolás Toro<sup>1</sup>, Carlos Kusnier<sup>1</sup>, Francisco Capani<sup>1</sup>, Francisco Capani<sup>3</sup>

<sup>1</sup> Instituto de Investigaciones Cardiológicas (UBA-CONICET), UBA-CONICET, Buenos Aires, Argentina, <sup>2</sup> CIPP, Universidad Católica Argentina, <sup>3</sup> Departamento de Biología, UAJK

Presenting author: **Lucas Udovin**, *lucas2304@hotmail.com*

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Perinatal asphyxia (PA) caused by low O<sub>2</sub> availability during birth is associated with brain damage, been the striatum one of the most affected areas. Palmitoylethanolamide (PEA) is a neuroprotective amide in brain injury models, including PA. However, its effects against PA requires deeper study in the striatum. Using Bjelke' model, full-term pregnant rats were rapidly decapitated, and uterus horns placed in a water bath (37C,19 min). One hour after, rats were treated with PEA (10 mg/kg,s.c.) and later given to surrogate mothers. Thirty day animals were perfused and striatum was analysed either for immunohistochemistry (n=3) and blotting (n=3). Phosphorylated high/medium molecular weight neurofilaments (pNF-H/M), Microtubule-Associated Protein 2 (MAP2), and Glial fibrillary acidic protein (GFAP) were analysed. 2-way ANOVA followed by Tukey analysis revealed a reduction in: pNF-H/M and MAP2 reactive areas (45% and 70%), GFAP+ cells (20%) and reduced MAP2 and pNF-H/M protein levels in PA-rat striatum respectively to the control value. PEA totally restored GFAP+ cells and MAP2 immunoreaction and partially prevented the decreased pNF-H/M reactive area (78%) induced by PA. PEA also reversed the MAP2 reduction and partially prevented the decrease of pNF-H/M protein levels induced by PA. No alteration in the GFAP protein levels was detected. PEA treatment attenuated the striatum damage induced by PA, demonstrating its therapeutic potential against PA.