SAN

SOCIEDAD ARGENTINA DE
INVESTIGACIÓN EN NEUROCIENCIAS

Argentine Society for Research in Neurosciences

Abstracts of the 2019 Meeting of Argentine Society for Research in Neurosciences

XXXIV ANUAL MEETING SAN 2019

VILLA CARLOS PAZ

CÓRDOBA

ARGENTINA

OCTOBER 3-5, 2019

The 2019 meeting of the Argentine Society for research in Neurosciences (SAN) was held at Villa Carlos Paz, Córdoba, Argentina, in Portal del Lago Hotel, from October 3rd to 5th 2019.

There were 350 attendees among researchers, scholars, PhD students and guests from different centers and universities of Argentina and abroad from 8 countries of Latin America, North America and Europe. Our congress had a total of 4 (four) Plenary Lectures, 6 (six) Symposia, 2 (two) Short Conferences, 6 (six) Youth Conferences, 19 (nineteen) Oral Communications, 256 Posters coveringa broad number of areas in the field of neurosciences together with 2 (two) special activities at lunch time and a round table on "Gender and Science".

It is noteworthy that two of the Plenary Lectures were placed in honors of the pioneers of neurochemistry andneurobiology of Argentina, Drs. Ranwel Caputto andEduardo De Robertis. This year the “Ranwel Caputto” Lecture was delivered by Prof. Belen Elgoyhen of the University of Buenos Aires (Argentina) and the “De Robertis” Lecture by Prof. Beatriz L. Caputto of the National University of Córdoba (Argentina). The “Opening Lecture” was given by Prof. Marla B. Feller, Department of Molecular and Cell Biology and Helen Wills Neuroscience Institute, University of California (USA) and the “Hector Maldonado” Lecture by Prof. Lucas Pozzo-Miller Department of Neurobiology, University of Alabama at Birmingham (USA). Short conferences were delivered by Drs. Ethan Buhr of the University of Washington in Seattle (USA), and Emilio Kropff of the Leloir Institute, Buenos Aires (Argentina).

As pre-meeting activity, the specific course for PhD students “Molecular and Cellular Neuroscience and Neurochemistry: Experimental strategies for studying the nervous system in health and disease”, took place on September 30-October 1-2, 2019 at the School of Chemical Sciences of the National University of Córdoba, Córdoba with the participation of more than 60 students.

Remarkably, all the activities organized, including the Symposia and the Young Investigator Lectures, covered a number of diverse disciplines in the field of neurosciences with the participation of outstanding invited speakers from Argentina and other countries.

Moreover, a very friendly atmosphere for discussion and data presentation was generated during the poster and oral communication sessions with the participation of 104 researchers, 139 Ph.D. students, 64 undergrads and 34 postdocs from Argentina**,** Chile**,** Brazil, Uruguay, USA, Canada, Denmark, Germany and France.

Short Program SAN 2019

Mon., Sept 30th - Wed., Oct 2nd	Thursday, October 3rd		Friday, October 4th	Saturday, October 5th
9:00 - 18:00 PRE-CONGRESS COURSE *"Molecular and Cellular Neuroscience and Neurochemistry: Experimental strategies for studying the nervous system in health and disease"* *Auditorio Ciencias I Facultad de Ciencias Químicas – UNC* **REGISTRATION**	**8:30 - REGISTRATION** **9:00 - 11:00** **SYMPOSIUM I** ***"New perspectives and mechanisms underlying neurological disorders"***		**8:30 - 10:30** **SYMPOSIUM III** ***"Molecular mechanisms of epigenetics and chromatin remodeling during brain development and aging"***	**8:30:00 - 10:30** **SYMPOSIUM VI** ***"Sensory processing and integration in olfactory and tactile systems"***
	11:00 - 11:30 Coffee break		**10:30 - 11:00** Coffee break	**10:30 – 11:00** Coffee break
	11:30 - 12:30 **OPENING LECTURE** Prof. Marla Feller		**11:00 - 13:00** **SYMPOSIUM IV** ***"First impressions: New roles for perinatal factors governing brain development"***	**11:00 - 12:00** **Oral Communications** Room Auditorio (OC 8-12) Room Lago (OC 13-18)
				12:00 - 13:00 **EDUARDO DE ROBERTIS LECTURE** Prof. Beatriz Caputto
	12:30 – Lunch with activities *"The 3Rs in neuroscience research"*		**13:00** - Lunch with activities *"HD Foundation"*	**13:00** – Farewell Lunch
	14:30 - 15:30 **SHORT LECTURES** Ethan Buhr Emilio Kropff	**14:30 – 16:00** **Oral Communications** Room Lago (OC 1-7)	**14:30-15:30** **Young Investigator Lectures** Room Auditorio (YIL 1-3) Room Lago (YIL 4-6)	
	15:30-16:00 **Gender and Science** Verónica de la Fuente			
	16:00 - 17:30 **SYMPOSIUM II** ***"Advances in early diagnosis and in experimental therapy of Alzheimer´s disease"***		**15:30 - 17:30** **SYMPOSIUM V** ***"Sexual differences on development and function of CNS"***	
	17:30 - Coffee break		**17:30** - Coffee break	
	17:30 - 19:30 **Poster Session (Even numbers)**		**17:30 - 19:30** **Poster Session (Odd numbers)**	
	19:30 - 20:30 **RANWEL CAPUTTO LECTURE** Prof. Ana Belén Elgoyhen		**19:30- 20:30** **HÉCTOR MALDONADO PLENARY LECTURE** Prof. Lucas Pozzo-Miller	
	20:30 **WELCOME RECEPTION**		**20:30** **SAN General Assembly**	

vitro and in vivo experiments showed that GM1 exerts neurotrophic functions by interacting with plasma membrane proteins through its oligosaccharide portion (osGM1). We investigate the response of the damaged dopamine system to osGM1 in the neurotoxin 1-methyl-4-phenyl-1,2,3,6-terahydropyridine (MPTP)-induced model of PD in mice. osGM1 was intraperitoneal injected (30.0 mg/kg) to young C57/BL6J mice with severe striatal dopamine depletion (approx 90%) caused an increase in striatal dopamine levels. This effect was not apparent at a higher dose (60 mg/kg). These results show that osGM1 can partially restore striatal dopamine levels in MPTP-treated mice. osGM1 may lead to the development of new types of useful neuroactive compounds for Parkinson's disease treatment.

Cellular and Molecular Neurobiology

P26.-Serotonin (5-HT) and catecholamines (CA) coordinates antagonistic food-related behaviors in C. elegans.

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Despite the intermodulation between serotonergic and adrenergic signals is crucial throughout the animal kingdom, the molecular and cellular mechanisms underlying this interrelation are poorly understood. We here use C. elegans as a model to get insights into the neural circuits linking 5-TH and CA.
When food-deprived worms encounter food, 5-HT is released to slow-down their locomotion and to stimulate pharyngeal pumping.In contrast, exogenous Tyramine (TA) and Octopamine (OA), invertebrate counterparts for adrenaline and noradrenaline, stimulate locomotion and decreases pharyngeal pumping. We found that tdc-1 mutants (unable to synthesize TA and OA) are hypersensitive to 5-HT-mediated paralysis, suggesting that TA and OA acts antagonistically to 5-HT. We also identify the TA (TYRA-3) and OA (SER-3 and SER-6) receptors involved in this antagonism. Moreover, our calcium imaging recordings showed that the peak of activity of serotoninergic neurons upon encountering food is significantly higher in tdc-1 null mutant background. Taken together these results suggest that TA and OA counteract serotoninergic signaling by driving opposing behaviors and by inhibiting 5-HT release. Our final aim is to decipher the neural circuit and the molecules involved in the reciprocal modulation between CA and 5-HT in C. elegans. Given the conservation in molecular components of these pathways, our studies are likely significant to understand this interrelation in other animals.

Cellular and Molecular Neurobiology

P27.-Tyrphostin AG879 and c-Src inhibitors reduced neurite outgrowth induced by stimulation of Ang II AT2 receptors in SH-SY5Y neuroblastoma cells.

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SH-SY5Y is a neuroblastoma cell line used as model of Parkinson disease, Alzheimer and differentiation. The signaling mechanism of neurite outgrowth induced by Ang II AT2 receptors and the interaction with NGF receptors remains unclear. We evaluated neurite outgrowth under differentiation conditions in SH-SY5Y cells, in the presence of different inhibitors: UO126 (MEK inhibitor), LY294002 (PI3K inhibitor) and PP2 (c-Src inhibitor). Only PP2 was able to reduce neurite outgrowth induced by the AT2 receptor´s agonist CGP42112A, supporting