



SAN2023

October 3rd - 7th

**Universidad Nacional de San Luis
San Luis - Argentina**

E-book

Organizing Committee	04
Sponsors & Venue	05
Code of Conduct	06
Program	07
Pre Meeting Courses	14
Plenary Lectures	16
Symposia	19
Young Investigator Talks	52
Oral Communications	62
Poster Session 1	
Cellular and Molecular Neurobiology	72
Chronobiology	97
Cognition, Behavior, and Memory	106
Development	155
Disorders of the Nervous System	158
Neural Circuits and Systems Neuroscienc	176
Neural excitability, synaptic transmission and neuron-glia interactions	184
Neurochemistry and Neuropharmacology	188
Neuroendocrinology and Neuroimmunology	192
Sensory and Motor Systems	197
Theoretical and Computational Neuroscience	205
Tools Development and Open Source Neuroscience	212
Comisión Especial SAN de Divulgación y Comunicación	215
Poster Session 2	
Cellular and Molecular Neurobiology	216
Chronobiology	241
Cognition, Behavior, and Memory	250
Development	299
Disorders of the Nervous System	302
Integrative Systems	319
Neural Circuits and Systems Neuroscience	320
Neural excitability, synaptic transmission and neuron-glia interactions	327
Neurochemistry and Neuropharmacology	331
Neuroendocrinology and Neuroimmunology	336

Sensory and Motor Systems	341
Theoretical and Computational Neuroscience	348
Tools Development and Open Source Neuroscience	356
Comisión Especial SAN de Género y Diversidades	358
Comisión Especial SAN de Federalización	359
Comisión Especial SAN de Historia	360

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SPONSORS & VENUE



VENUE

The XXXVIII Annual Meeting of the SAN will be held at the Auditorium of the National University of San Luis, San Luis, Argentina, from October 2nd to 7th, 2023. The meeting will be held mainly in face-to-face format.

09 | Breathing alteration against hypoxia as a function of early ethanol exposure.

Macchione, AF 1-2

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Maternal ethanol (EtOH) intake during pregnancy and lactation is a highly frequent “social” behavior in Argentine, exposing fetus or neonates to moderate EtOH intoxication through the amniotic fluid and placenta. Early EtOH exposure triggers a spectrum of neurobehavioral dysfunctions affecting, also, the breathing response. In an animal model equivalent to the 3rd trimester of the human gestation we explore the early ethanol exposure effects on the ventilatory responses in normoxic and hypoxic-air conditions. We also study central areas involved in breathing modulation as the solitary tract nucleus and the medullary raphe system. Our results show that a brief and early ethanol exposure alters both basal and hypoxia-induced breathing frequencies and apneas through modifications in the activation patterns of central areas of study. Actually, early ethanol exposure induces a basal breathing depression in normoxic conditions but, against a hypoxic challenge, ethanol triggers two consecutive altered events: first a lower hyperventilation rate during the hypoxic event itself and then, during the post-hypoxic period, ethanol elicit the emergency of an adaptive phenomenon, the ventilatory long-term facilitation. Alterations in the activation patterns in the NTS and raphe obscurus, and an increase in the 5HT levels in the medullary raphe nuclei (magnus, obscurus y pallidus) were observed as a function of different ways of early ethanol exposure.

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