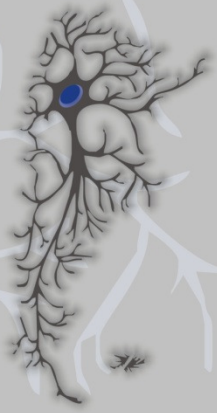
XXVIII CONGRESO ANUAL DE LA SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

&

Reunión Satélite / Neurobiología del Comportamiento:
"Neuroetología y Neurobiología de la Memoria en el Cono Sur"

Septiembre 30 - Octubre 4, 2013, Huerta Grande, Córdoba, Argentina.



SAN

SOCIEDAD ARGENTINA DE
INVESTIGACIÓN EN NEUROCIENCIAS

XXVIII CONGRESO ANUAL DE LA
SOCIEDAD ARGENTINA DE INVESTIGACION EN NEUROCIENCIAS

&

Reunión satélite sobre Neurobiología del Comportamiento:
"Neuroetología y Neurobiología de la Memoria en el cono sur"
Un homenaje a Héctor Maldonado

PROGRAM

Monday September 30th: SATELLITE DAY 1

09:00: **Registration**

10:30: **Introduction**

11:00: **Symposium on Neurobiology of Memory I - International Society for Neurochemistry Symposium (**Room A)
Chair: Arturo Romano
Jorge Quillfeldt, Dep. de Biofísica, PPG Neurociências ICBS. Universidade Federal de Rio Grande do Sul, Brasil.
"Exploring the possible physiological roles of memory reconsolidation: reativation enables updating, precision-keeping and strenghtening"
Arturo Romano, IFIBYNE-CONICET, FCEN-Universidad de Buenos Aires, Argentina
"Enduring memories and the NF-kB-dependent chromatin regulation"
Rafael Pagani, Departamento de Cs Fisiológicas, FMED-Universidad de Buenos Aires, Argentina.
"Understanding Learning Disability"
Valeria Della Maggiore, Departamento de Cs Fisiológicas, FMED, Universidad de Buenos Aires, Argentina.

Neuroendocrinology and Neuroimmunology
Poster Number 197 / Session 2

GABA transporters in human lymphocytes

María José De Rosa, LeonardoDionisio, H. Caldironi, Cecilia Bouzat
INIBIBB
mjderosa@criba.edu.ar

GABA is the main inhibitory neurotransmitter in CNS and is associated to several neurological disorders. GABA transporters (GATs) play a critical role in GABA level regulation by allowing re-uptake of neuronal secreted GABA. Four GAT subtypes (GAT 1-3 and BGT-1) have been described in humans. Previously, we reported a complete GABAergic system in lymphocytes. Here, we studied the modulation of the expression and activity of GATs in human lymphocytes by the mitogen phytohemagglutinin (PHA). We determined mRNA GAT expression in activated and resting cells (with and without PHA, respectively). GAT 3 was not detected under any condition, whereas GAT 2 and BGT-1 were detected in all activated cells. Expression of GAT 1 was variable among samples and conditions. In line with these observations, incubation with PHA also increased [3H]GABA uptake. To evaluate the physiological role of GATs we determined cell proliferation by PHA in the presence of nipecotic acid (NA), a GAT inhibitor. Cell proliferation was negatively modulated by NA. In addition, secreted GABA was detected only in supernatant from activated lymphocyte cultures. Taken together, our results show that lymphocytes express functional GATs whose expression is modulated by PHA, GATs regulate cell proliferation, and lymphocyte cells have the ability to secrete GABA. Pharmacological modulation of GATs present in lymphocytes could be a new target to modulate immune response.