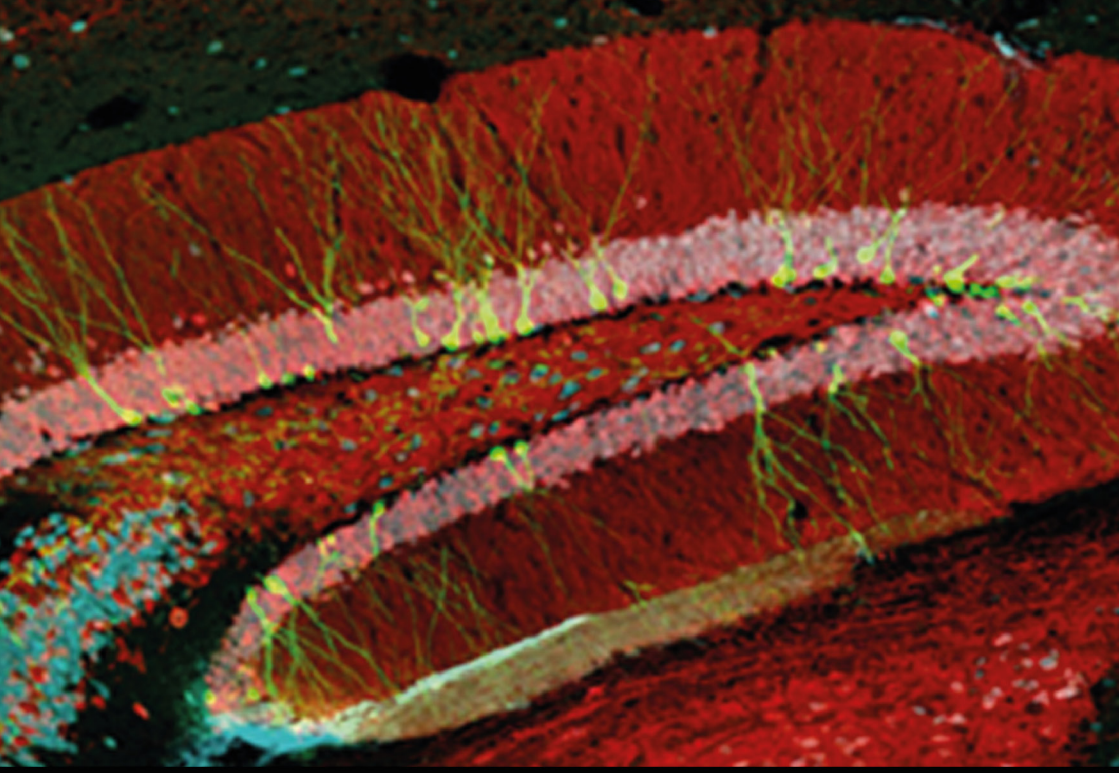

SAN
SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

XXIX ANNUAL MEETING
AND SAN-ISN SMALL CONFERENCE AND COURSE

"New mechanisms of neuro-glial interaction: Their contribution to nervous system development and repair"

September 29 | October 3, 2014
Huerta Grande, Córdoba, Argentina

COMMITTEES

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A. Javier Ramos

Tomás Falzone

Fernanda Ledda

Gustavo Paratcha

Analia Reinés

Meeting Organizing Committee:

Tomás Falzone

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Foto de tapa: Imagen obtenida por microscopía confocal, correspondiente a un corte de hipocampo obtenido de ratones adultos. En verde fluorescente pueden observarse neuronas granulares generadas en el cerebro adulto, marcadas por transduccion retroviral.

Créditos: Georgina Davies-Sala, Lab Schinder.

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Dear SAN members, friends and colleagues,

On behalf of the 2014 organizing committee and the SAN Board of Directors, it is my great pleasure to welcome you all to our XXIX Annual Meeting and to the SAN-ISN special small conference. As in previous years, Huerta Grande, Córdoba, is the place where we will gather. This retreat in the middle of the hills gives the unique opportunity to host us all in one place and provides the right atmosphere for scientific discussions.

With an increasing ageing population, neuroscience is a strategic area of research in the 21st century. Although far from the large-scale investments such as the USA BRAIN Initiative or the European Human Brain projects, the Argentinean neuroscience community continues to grow and SAN has now near 500 members. This mainly derives from the personal effort of each one of our members who, through a strong passion for their work, set free will to their imagination and explore new horizons, even with limited resources. The excellence of Argentinean neuroscience is reflected by the increasing number of publications in high-profile journals and the prestigious awards received by SAN members in 2014, such as the L´ORÉAL Unesco For Women in Science for Latin America and recognitions from the Humboldt Foundation.

We at SAN are committed to aid in deciphering the complexity of the brain and the nervous system, promoting high quality science and encouraging translational research that will ultimately benefit society through a better understanding of neurological diseases. This can only be achieved by bringing together scientists with diverse scientific background and expertise, different nationalities and at different stages of their career. We hope that the XXIX Annual Meeting will fulfill this objective. Thank you all invited speakers for coming from far away to share your newest discoveries. Thank you all neuroscience students for your energy and refreshing and renovating ideas. Thank you SAN members for your continuing support to the society. And last, but not least, thank all sponsors that make our Annual Meetings a reality.

Enjoy the meeting, establish new collaborations, come up with innovative ideas, meet old friends and make new ones.

Ana Belén Elgoyhen
SAN President

CONTENT

PROGRAM

SAN-ISN Small Conference and course

"New mechanisms of neuro-glial interaction: Their contribution to nervous system development and repair"

DAY 1: Monday September 29th

8:00-9:30	Registration
9:30-10:15	Welcome words by the SAN-ISN small conference and course organizers Description of the general organization of the course and initial orientation for the Project-writing workshop for students
10:15-10:45	Coffee break and post your poster
10:45-12:15	Lecture I: ***"Tripartite synapse: new glial roles"*** **Vladimir Parpura,** University of Alabama at Birmingham, USA
12:30-14:00	Lunch
14:30-16:00	Lecture II: "***Astrocytes: key function in the balance between excitatory and inhibitory synaptic inputs"*** **Flavia Gomes,** Universidade Federal do Rio de Janeiro, Brasil
16:00-17:30	Lecture III: ***"Characterization of astrocytes phenotypes modulating disease progression in inherited ALS"*** **Luis Barbeito,** Institut Pasteur, Montevideo, Uruguay
17:30-18:30	Poster viewing I & refreshments
18:30-21:00	Group activity meeting I: Project writing workshop for students
21:30	Dinner

DAY 2: Tuesday September 30th

7:30-8:30	Breakfast
8:30-10:00	Lecture IV: ***"Glia and the formation/plasticity of neural circuits"*** **Gabriel Corfas,** Director, Kresge Hearing Research Institute, University of Michigan, USA
10:30-11:00	Coffee Break and poster viewing II
11.00-12:30	Lecture V: ***"Functional role of microglial cells in Parkinson´s Disease"*** **Fernando Pitossi,** Instituto Leloir, Buenos Aires, Argentina
13:00-14:30	Lunch
14:30-16:30	Lecture VI: ***"The role of Schwann cells in degenerative and regenerative axonal programs"*** **Felipe Court,** Pontificia Universidad Católica de Chile, Santiago, Chile
16:30-17:00	Coffee Break and poster viewing III
17:00-18:30	Group activity meeting II: Project writing workshop for students
18:30-20:30	Group activity meeting II: Project writing workshop, student´s presentations
20:30-21:30	Round table and final conclusions of the SAN-ISN small conference and course
21:30	Dinner

XXIX CONGRESO ANUAL DE LA SOCIEDAD ARGENTINA DE INVESTIGACION EN NEUROCIENCIAS

DAY 1: Wednesday October 1st

09:00 Registration

10:00 Welcome by Organizers

10:10-12:30 **Symposium I: "The Good and the Bad of Neurotrophins"**
Chairs: **Laura Montroull y Andrea Cragnolini,** Instituto de Investigaciones Biológicas y Tecnológicas, Universidad Nacional de Córdoba, CONICET, Argentina

10:20-10:50 *"XIAP Regulates Sub-Lethal Caspase Activity in Axons and Synapses"*
Philip Barker, McGill University, Montreal, Canada

10:50-11:20 *"The multifaceted role of the p75 neurotrophin receptor in the brain"*
Wilma Friedman, Rutgers University, USA

11:20-11:50 ***"Role of the endocytic system in BDNF-mediated dendritic branching"***
Francisca Bronfman, Pontificia Universidad Católica de Chile, Santiago, Chile

11:50-12:20 ***"Endogenous BDNF/proBDNF level modification in neuronal death and survival"***
Daniel Mascó, Universidad Nacional de Córdoba-CONICET, Córdoba, Argentina

12:30-14:00 Lunch

14:30-16:00 **Short talks selected from poster abstracts** (parallel sessions):
Room A – Chair: **A. Javier** Ramos. Instituto de Biología Celular y Neurociencia (IBCN-CONICET), Universidad de Buenos Aires
Room B – Chair: **Fernanda Ledda.** Instituto de Biología Celular y Neurociencia (IBCN-CONICET), Universidad de Buenos Aires

16:15-19:15 **Poster Session I, Networking & Coffee break**
16:15-17:45 ***EVEN NUMBER poster presentation***
17:45-19:15 ***ODD NUMBER poster presentation***

19:15-20:15 **Eduardo de Robertis Plenary Lecture**
Chair: **Ana Belén Elgoyhen,** Instituto de Investigaciones en Ingeniería genética y Biología Molecular, Dr Héctor N. Torres, Argentina
"Unexpected interactions in the basal ganglia"
Bernardo Sabatini, Neurobiology Department, Harvard Medical School, Howard

Hughes Medical Institute, USA

20:15-20:45 **SAN Award to the Best Doctoral Thesis in Neuroscience 2014**
Chair: **Juan Goutman,** Instituto de Investigaciones en Ingeniería genética y Biología Molecular, Dr Héctor N. Torres, Argentina
"Stress-Induced Cocaine Sensitization: A Study of Glutamate Homeostasis and its Interaction with the Dopaminergic System in Nucleus Accumbens"
Constanza García Keller, Dpto de Farmacología, Fac. Ciencias Químicas, Universidad Nacional de Córdoba, Argentina - Department of Neurosciences, Medical University of South Carolina, USA

21:00-22:45 Dinner
Dinner activity: eat with the big shots I!
Students and postdocs can sign up to share the table with lecturers and symposia speakers

23:00 Asamblea Ordinaria SAN/ SFN Chapter

DAY 2: Thursday October 2nd

7:30-8:15 Breakfast

8:15-12:50 **SAN–ISN Symposium: "Deconstructing Adult Neurogenesis: From Neural Stem Cells to Neuronal Networks in Health and Disease"**
Chair: **Alejandro Schinder,** Fundación Instituto Leloir, Buenos Aires

8:15-9:00 ***"A novel view of neurogenesis and memory encoding in the dentate gyrus"***
Alejandro Schinder, Laboratory of Neuronal Plasticity, Fundación Instituto Leloir, Buenos Aires

9:00-9:50 ***"Analysis of neural stem cells in the adult mammalian brain, one cell at a time"***
Hongjun Song, Institute for Cell Engineering and Department of Neuroscience, Johns Hopkins University School of Medicine, Baltimore

9:50-10:40 ***"Brains in metamorphosis: physiological and forced neurogenesis in the adult brain"***
Benedikt Berninger, Adult Neurogenesis & Cellular Reprogramming, Institute of Physiological Chemistry University Medical Center, Johannes Gutenberg, University Mainz

10:40-11:10 Coffee Break

11:10-12:00 *"Adult Neurogenesis and Psychiatric Neurodevelopmental Disorders"*
Guoli Ming, Institute for Cell Engineering and Department of Neuroscience, Johns Hopkins University School of Medicine, Baltimore

12:00-12:50 ***"From pluripotent stem cells to cortical circuits"***
Pierre Vanderhaeghen, Institute for Interdisciplinary Research and Institute of Neuroscience, Free University of Brussels

13:00-14:45 Lunch

15:00-17:30 **Poster Session & Networking II & Coffee break**

15:00-16:15 ***ODD NUMBER poster presentation***

16:15-17:30 ***EVEN NUMBER poster presentation***

17:30-19:00 **IBRO Special Lectures**
Chair: **Marta Hallak**, Centro de Investigaciones en Química Biológica de Córdoba, CONICET

17:30-18:00 ***"The Global Mission of IBRO, and IBRO 2015 in Rio de Janeiro"***
Sten Grillner, IBRO Secretary-General, Karolinska Institute, Stockholm, Sweden

18:00-19:00 *"**The Blueprint of the Vertebrate Motor System – from Microcircuits to Selection of Behaviour"***
Sten Grillner, IBRO Secretary-General, Karolinska Institute, Stockholm, Sweden

19:00-19:30 Coffee Break

19:30-21:00 **Young Investigator Symposium**
Chair: **Tomás Falzone**, CONICET, Universidad de Buenos Aires

19:30-19:50 ***"Impact of axonal, autoreceptor mediated, synaptic events on cerebellar interneuron's activity"***
Javier Zorrilla de San Martin, Université Paris Descartes, France

19:50-20:10 *"Caspase-3 and Calpains become active during (and play a role in) injury-induced axonal degeneration but are not inhibited during NAD+-mediated protection"*
Nicolás Unsaín, McGill University, Canada/Instituto de Investigacion Médica Mercedes y Martín Ferreyra, CONICET, Argentina

20:10-20:30 *"Amyloid Precursor Protein Is an Autonomous Growth Cone Adhesion Molecule Engaged in Contact Guidance"*
Lucas Sosa, University of Colorado School of Medicine, USA/Centro de Investigaciones en Química Biológica de Córdoba, CONICET , Argentina

20:30-20:50 *"Neurogenin3 is a key regulator in serotonergic vs. glutamatergic neuronal cell fate"*

Abel Carcagno, Fundación Instituto Leloir, Argentina

21:00 Dinner

Dinner activity: eat with the big shots II!

23:00 PARTY!!!!

DAY 3: Friday October 3rd

8:00-9:00 Breakfast

9:00-11:00 **Symposium II: "Ion channels from development to behavior"**

Chair: **Nara Muraro**, Fundación Instituto Leloir, Argentina

9:00-9:30 ***"Inhibitory aminergic signaling in C.elegans: characterization and in vivo manipulation"*** **Diego Rayes**, Instituto de Investigaciones Bioquímicas de Bahía Blanca, Bahía Blanca, Argentina

9:30-10:00 ***"How do Drosophila clock neurons fire up?"***

Nara I. Muraro, Fundación Instituto Leloir, Argentina

10:00-10:30 *"Pumilio-2 regulates translation of Nav1.6 to mediate homeostasis of membrane excitability"*

Richard Baines, Faculty of Life Sciences, University of Manchester, UK

10:30-11:00 *"Activity-dependent regulation of coordinated ion channel expression: from mRNA to network output"*

David Schulz, Department of Biological Sciences, University of Missouri, USA

11:00-11:30 Coffee break

11:30-12:30 **Ranwel Caputto Plenary Lecture**

Chair: **Arturo Romano**, Instituto de Fisiología Biología Molecular y Neurociencias, Universidad de Buenos Aires

"Motor coordinates to study birdsong"

Gabriel Mindlin, Departamento de Física, Facultad de Ciencias Exactas y Naturales, UBA, Argentina

12:30 Closing remarks by organizers

13:00 Farewell Barbecue

16:00 Meeting adjourns

Recipients of Young ISN Neurochemistry Awards

Anabela Palandri, Córdoba, Argentina
María Paula Avalos, Córdoba, Argentina
Andrea Susana Guzmán, Córdoba, Argentina
María Vanessa Cadena, Buenos Aires, Argentina
Nonthue Alejandra Uccelli, Berazategui, Argentina
Jerónimo Lukin, Buenos Aires, Argentina
Laura Montroull, Córdoba, Argentina
Nicolás Unsain, Córdoba, Argentina
Luis Ernesto Acosta, Buenos Aires, Argentina
María Florencia Almeira Gubiani, Buenos Aires, Argentina
Diego Damián Alvarez, Buenos Aires, Argentina
Marcos Andrés Campolongo, Buenos Aires, Argentina
Micaela Daiana García, San Martín, Argentina
María Paula Ibáñez Rodríguez, Mendoza, Argentina
Nadia Kazlauskas, Buenos Aires, Argentina
Noelia Giselle Lino, Buenos Aires, Argentina
Magdalena Miranda, Buenos Aires, Argentina
Javier Andrés Muñiz, Buenos Aires, Argentina
Patricio Roberto Pavía, Buenos Aires, Argentina
Gonzalo Miguel Piñero, Buenos Aires, Argentina
María Celeste Solange Rivero Echeto, Buenos Aires, Argentina
Gerardo Ariel Rosciszewski, Buenos Aires, Argentina
María Micaela Sartoretti, Buenos Aires, Argentina
Silvio Temprana, Buenos Aires, Argentina
Lucila Brocardo, Bernal, Argentina
Octavio Gianatiempo, Buenos Aires, Argentina
Florencia Martina Soler García, San Luis, Argentina
Betina González, Buenos Aires, Argentina
Veronica Murta, Buenos Aires, Argentina
Constanza García Keller, Córdoba, Argentina
Alejandra Ivetth **Pérez** Alvarez, Caracas, Venezuela
Sonia Carolina Guerrero Prieto, São Bernardo do Campo, Brasil
Wagno Alcantara de Santana, Salvador, Brasil
Angelica Jhoan Alarcon Garcia, Bogotá, Colombia
Claudia Angelica Bonilla Escobar, Santo Andre, Brasil
Irene Riveros Barrera, Bogotá, Colombia
Cristian Ivan Giraldo León, Bogotá, Colombia
Nicolás Iván Bertone Cueto, Buenos Aires, Argentina
Victoria Rozes Salvador, Córdoba, Argentina

P84.-A novel spherical treadmill apparatus for the head-fixed behaving rat

Anabel M. M. Miguelez Fernández[1°], Ariel Burman[2°], Alfredo I. Martínez Cáceres[2°], B. Silvano Zanutto[1°], Sergio E. Lew[2°]

[1°]Instituto de Biología y Medicina Experimental (IByME - CONICET), Laboratorio de Biología del Comportamiento, Ciudad de Buenos Aires, Argentina.; [2°]Instituto de Ingeniería Biomédica (IIBM-UBA), Facultad de Ingeniería, Universidad de Buenos Aires, Ciudad de Buenos Aires, Argentina

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We introduce a novel training apparatus for rodents that allows animals to perform motor responses while being head fixed.

This apparatus was developed for the purpose of recording extracellular neuronal activity in the motor cortex of an animal while it performs a motor task. It consists of a freely rotating spherical treadmill and an iron structure where animals are head fixed. Once secured to the structure, animals are placed over the treadmill with their limbs on the sphere so they can walk in any direction. Head fixation is achieved by an x-shaped aluminum piece that is surgically implanted on the skull.

Movements of the animal are measured as rotations of the spherical treadmill. Sphere speed and rotation direction are detected with a 60fps video camera, using custom designed software. The software also allows a wide control of training parameters and performs data storage for posterior analysis.

Here we report training a Long Evans rat in an operant conditioning task where walking on the treadmill after presentation of an auditory stimulus was rewarded with a drop of water.