



SAN

SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

www.saneurociencias.org.ar

Buenos Aires, January 7, 2012

Michael Cousin, Ph.D.
Committee for Aid and Education in Neurochemistry
Centre for Integrative Physiology
George Square
University of Edinburgh
Edinburgh EH8 9XD United Kingdom
Email: M.Cousin@ed.ac.uk

Dear Dr. Michael Cousin,

We would like to deeply thank the support from the Committee for Aid and Education in Neurochemistry and the International Society for Neurochemistry towards the organization of the workshop "Electrophysiological Recordings and Optical Imaging in Neuroscience", satellite to the XXVI Annual Meeting of the Argentine Society for Research in Neuroscience. The course was exciting and extremely successful not only because the outstanding scientific and academic work presented by outstanding speakers but also because it brought together graduate students and postdoctoral fellows from different universities and research institutes of Argentina and South America, and international professors and neuroscientists.

The course generated an ideal atmosphere that promoted rich discussions that covered topics from the principles to the latest advances in electrophysiology recordings and imaging techniques. Students were not only benefited from direct interactions with the invited instructors, but also from the exchange of ideas and experiences with a community of participants. We are very happy to report that the scientific, academic and social outcomes exceeded the expectations of the Organizing Committee and conferees.

Briefly the course "Electrophysiological Recordings and Optical Imaging in Neuroscience" was held in Huerta Grande, Cordoba, from October 18th to October 19th. This natural environment allowed all the conferees to enjoy a very tight scientific program that included:

- Nine Lectures given by leading scientists in the field: Stephane Dieudonné, PhD; Boris Barbour, PhD; Mariano Casado, Ph.D; Marco Diana, PhD, David Ogden, PhD and Ariel Escobar, Ph.D.
- Two Round Tables aimed at providing a more informal environment for discussions.
- Three sessions of poster presentations with a total number of 248 communications. All graduate students first authors from posters were awarded with travel fellowships (total 214) provided by the Organizing Committee of the Meeting. In addition we were also able to provide additional support to students from other countries in Latin American attending to the meeting.

The total number of students to the workshop was of 99, (96 from Argentina and 3 from Chile), 36 of them took the final online exam (34 from Argentina and 2 from Chile). The course was accepted by the University of Córdoba towards the Ph.D. Programs in several Universities of the country. The number of attendees to XXVI Annual Meeting of the SAN 2011 was 355, including 315 from Argentina, 25 from other latinamerican countries (Uruguay, Brazil, Chile, Cuba and Venezuela) and 15 from outside of the region (USA, France, UK and Hungary).

We have acknowledged the support of CAEN and ISN in the Meeting Book, in the SAN website, in slides before the presentations and banners in the lobby during the course and the meeting.



SAN

SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

www.saneurociencias.org.ar

The CAEN-ISN grant of US\$ 6000 was used towards covering the following costs: Accommodation/Fellowships for students US\$ 2469, Local Air tickets and transfers for Faculty US\$ 359, Accommodation for Faculty/Speakers US\$ 987, Meals/Services for Faculty and Students US\$ 1916, Administration and secretariat US\$ 420.

You will find a copy of all the invoices included in this shipment. In the case you need the original invoices, we can provide them promptly at your request.

A copy of the SAN2011 Meeting Book is also sent among the documents and can be found at the SAN webpage www.saneurociencias.org.ar.

Thanking again the support from the Committee for Aid and Education in Neurochemistry and the International Society for Neurochemistry,

Sincerely,

Guillermo Lanuza, Ph.D.
Member of the Organizing Committee 2011
Annual Meeting Argentine Society for Neuroscience

Dr. Germán Szapiro.

Research Associate CNRS.

Cerebellum group, Neuroscience Section,

IBEns (CNRS UMR 8197 / INSERM U 1024) Ecole Normale Supérieure. Paris, France

E-mail: szapiro@biologie.ens.fr

Dr. Juan Goutman.

Investigator CONICET. Instituto de Investigaciones en Ingeniería Genética y Biología Molecular (INGEBI-UBA-CONICET), Buenos Aires, Argentina

E-mail: goutman@dna.uba.ar

Dr. Marcelo Rubinstein.

Investigator CONICET. Instituto de Investigaciones en Ingeniería Genética y Biología Molecular (INGEBI-UBA-CONICET), Buenos Aires, Argentina

Email: congresoSAN2011@gmail.com

Dr. Guillermo Lanuza.

Investigator CONICET. Fundación Instituto Leloir

Av. Patricias Argentinas 435. Buenos Aires 1405. Argentina

Phone: +54-11-4238-7500

Email: GLanuza@Leloir.org.ar



SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

www.saneurociencias.org.ar

XXVI REUNIÓN ANUAL SAN 2011

REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE
INVESTIGACIÓN EN NEUROCIENCIA

18-22 OCTUBRE 2011. HUERTA GRANDE, CÓRDOBA

“ELECTROPHYSIOLOGICAL RECORDINGS AND OPTICAL IMAGING IN NEUROSCIENCE”

ABSTRACT

Neurons are excitable cells that express themselves electrically. These signals - changes in membrane potential caused by ions moving through channels - take place on a millisecond timescale and over a range of millivolts, involving tiny currents of pico- and nano ampères. The nature of these signals and their time scale impose severe restrictions on the experimental approaches for studying the physiology of neurons. The two most suitable methods are electrophysiology and imaging. However, the technical nature of these disciplines makes them inaccessible to many neurobiologists. This invisible barrier is an obstacle to the development of neuroscience. The goal of the course is to present in a simple way the principles, capabilities and limitations of electrophysiological and imaging techniques. It will provide a theoretical grounding of each technique, and illustrate each using real examples, in many cases produced in the laboratory of the instructor. The course will consist of two modules: the first devoted to the study of the bases of the electrophysiology and the second to imaging techniques.

FACULTY

Stephane Dieudonné, Ph.D. Institut de Biologie, CNRS UMR 8197 INSERM U 1024. Ecole Normale Supérieure, Paris, France.

Boris Barbour, Ph.D. Neuroscience Section, IBEns (CNRS UMR 8197 / INSERM U 1024) Ecole Normale Supérieure, Paris, France.

Mariano Casado, Ph.D. Neuroscience Section, IBEns (CNRS UMR 8197 / INSERM U 1024) Ecole Normale Supérieure, Paris, France.

Marco Diana, Ph.D. Institut de Biologie. CNRS UMR 8197 – INSERM U 1024. Ecole Normale Supérieure, Paris, France.

David Ogden, Ph.D. Laboratoire de Physiologie cérébrale, UMR8118, Université Paris Descartes, Paris, France.

Ariel Escobar, Ph.D. University of California Merced, CA, USA.

ORGANIZERS

Germán Szapiro, Ph.D. Neuroscience Section, IBEns (CNRS UMR 8197 / INSERM U 1024) Ecole Normale Supérieure, Paris, France. E-mail: szapiro@biologie.ens.fr

Juan Goutman, Ph.D. INGEBI-CONICET, Buenos Aires, Argentina. E-mail: goutman@dna.uba.ar

Marcelo Rubinstein, Ph.D. INGEBI-UBA-CONICET, Email: congresoSAN2011@gmail.com



SAN

SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

www.saneurociencias.org.ar

STUDENTS

The course "Electrophysiological Recordings and Optical Imaging in Neuroscience" was accepted in the Universidad Nacional de Córdoba, Facultad de Ciencias Químicas (Resolution#585/11) as part of the Ph.D. Programs in Neuroscience.

99 students were part of the course and 36 took the final examination, (34 from Argentina and 2 from Chile).

PROGRAM.

DAY 1 - OCTOBER 18TH – ELECTROPHYSIOLOGY.

8.00: Registration

09:00 - 11:00: 1st lecture. Membrane potential, action potential, excitatory and inhibitory synaptic currents (Mariano Casado).

This first lecture was intended to level the knowledge on basic neurophysiology among participants of the course.

11:05 - 11:20: Coffee brake.

11:30 - 12:55: 2nd lecture. Extracellular and intracellular solutions, basic properties, ions (David Ogden).

Discussion on the most common solutions used in cellular physiology, the basis for choosing specific ions, and also the underlying cellular principles.

13.00 - 14:00: Lunch.

14:00 – 18:00: 3rd lecture. Patch clamp techniques: voltage clamp, current clamp, perforated patch. (Mariano Casado + Marco Diana).

The instructors presented a comparative analysis of different electrophysiological techniques, its applications and limitations. Typical problems, such as series resistance in patch-clamp recordings (whole cell configuration) were evaluated. Practical approach. The choice of the appropriate techniques for each experimental condition and according to the parameter that needs to be measured.

18:00 - 18:30: Coffee brake.

18:30 - 20:30: 4th lecture. Electronics, the construction of a (basic) amplifier and test with model cell (Boris Barbour and David Ogden).

Practical approach. An introduction on the electronics used in patch-clamp, voltage-clamp amplifiers with microelectrodes, current-clamp, etc. Students were divided in small groups for discussion of details in their design of basic models of amplifiers. Demonstrations. Tests using oscilloscope and model cell.

20:45 - 21:15: Discussion. Round table.

Final session among students and faculty in order to answer remaining questions related to the subjects of this first part of the course.

21.30 - 22:30: Dinner.



SAN

SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

www.saneurociencias.org.ar

DAY 2 - OCTOBER 19TH - IMAGING

08:15 - 09:15 Breakfast Meeting

This was an opportunity for students to have informal chats with the professors to discuss about their interests, future plans, career development.

09:15 - 11:15. 5th lecture. Introduction to conventional and confocal microscopy (Stephanee Dieudonné).

This part was intended to level basic knowledge of students about the basis of optics and the principles and application of conventional and confocal microscopy. Concepts such as light source, laser, lamps, detectors were discussed. As for the first lecture in the first section, this talk was organized to provide the students with the tools to understand the rest of the section.

11:15- 11:30: Coffee brake.

11:30 - 13:30: 6th lecture. Introduction to 2-photon microscopy (Stephanee Dieudonné).

Basis and applications of two-photon microscopy, comparison with confocal microscopy.

13.45 - 14:30: Lunch

15:00 - 17:00: 7th lecture. Caged compounds and Ch- Rhodopsins. Principles, compounds (David Ogden and Marco Diana).

Ca²⁺ and glutamate uncaging as well as the novel Ch-Rhodopsin/allo-rhodopsin tools were studied.

17:30 - 18:45: 8th lecture. Voltage sensitive dyes: principles – compounds – applications (David Ogden).

19:10 – 20:30: 9th lecture. Data analysis, programs (Boris Barbour).

A free software, WinWCP, for data acquisition was presented. Examples from previous sections were used to explain the principles of signal analysis in electrophysiology (i.e., spike sorting – cross correlogram – statistics). An open source -free - software for data analysis developed in Barbour's lab was introduced.

20:45 – 21:30: Round Table.

Final discussion on the contribution, perspectives and challenges of imaging techniques on neurophysiology.

21.45 - 22:45: Dinner.

22.45: Social Event.

BIBLIOGRAPHY

Bibliography to lectures can be downloaded at www.saneurociencias.org.ar, Annual Meeting 2011, Course "Electrophysiological Recordings and Optical Imaging in Neuroscience"



SAN

SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

www.saneurociencias.org.ar

List of students that took the final examination

The course "Electrophysiological Recordings and Optical Imaging in Neuroscience" was accepted in the Universidad Nacional de Córdoba, Facultad de Ciencias Químicas (Resolution#585/11) as part of the Ph.D. Programs in Neuroscience.

Acosta, Luis Ernesto
Agosti, Francina
Alfieri Julio
Alvarez Rodrigo Javier
Belingheri Ana Verónica
Baidanoff Fernando Martín
Beltran Gonzalez Andrea
Bengochea Mercedes
Bergé Ignacio
Borroni Virginia
Braz Bárbara Yael
Bussi Ivana Leda
Carbó-Tano Martín
Ciccía Lucía
Cotella Evelin Mariel
Ferrerías Soledad
Formoso Karina
Fustiñana María Sol
Gasulla Javier
Goitia Belen
Krapacher Favio
Lino Noelia
Lopez María Eugenia
Lopez Soto Eduardo Javier
Magani Fiorella
Marachlian Emiliano
Masseróni María Luján
Monteleone Melisa Carolina
Pardi, Belen
Piantanida Ana Paula
Quassollo Gonzalo
Raineri Andersen Mariana
Rozés Salvador Victoria
Ruzzi Leonardo Rubén
Temprana, Sivio
Trinchero, Mariela
Tubert Cecilia

SAN2011

XXVI CONGRESO ANUAL
DE LA SOCIEDAD ARGENTINA
DE INVESTIGACIÓN EN NEUROCIENCIA

HUERTA GRANDE, CÓRDOBA
18-22 OCTUBRE 2011.

CONICET



www.conicet.gov.ar

AGENCIA

NACIONAL DE PROMOCION
CIENTIFICA Y TECNOLÓGICA



www.agencia.gov.ar

twas

www.twas.org



ISN

International Society
for Neurochemistry

CAEN-ISN

www.neurochemistry.org



THE COMPANY OF

Biologists

www.biologists.com

Development
dev.biologists.org

The Journal of
**Experimental
Biology**
jeb.biologists.org



IBRO-LARC
www.ibro.org

Ministerio de
CIENCIA Y
TECNOLOGÍA



GOBIERNO DE LA
PROVINCIA DE
CORDOBA

www.mincyt.cba.org.ar



Universidad Nacional
de Córdoba

www.unc.edu.ar



SOCIETY FOR NEUROSCIENCE

Argentina Chapter
www.sfn.org



www.neurosciences.asso.fr



AMBASSADE DE FRANCE EN ARGENTINE

abcam



www.abcam.com

OLYMPUS

bioANALITICA
a r g e n t i n a

www.bioanalitica.com.ar

1- ORGANIZING COMMITTEE.....	11
2- PROGRAM.....	13
3- COURSE ABSTRACTS.....	19
4- MEETING ABSTRACTS.....	27
5- YOUNG INVESTIGATORS ABSTRACTS.....	43
6- POSTERS ABSTRACTS	
INDEX BY AREA AND SESSION.....	53
CELLULAR AND MOLECULAR NEUROBIOLOGY.....	69
CHRONOBIOLOGY.....	122
COGNITION, BEHAVIOR, AND MEMORY.....	130
COMPUTATIONAL NEUROSCIENCE.....	174
MOTOR SYSTEMS.....	180
NEURAL CIRCUIT PHYSIOLOGY.....	186
NEUROCHEMISTRY AND NEUROPHARMACOLOGY.....	194
NEUROENDOCRINOLOGY AND NEUROIMMUNOLOGY..	208
SENSORY SYSTEMS.....	217
SYNAPTIC TRANSMISSION AND EXCITABILITY.....	227
7- AUTHORS LIST.....	241

INDEX

SAN2011 | Organizing Committee

Guillermo Lanuza, *Instituto Leloir - Buenos Aires*

Pablo López, *Instituto Mercedes y Martín Ferreyra - Córdoba*

María Eugenia Pedreira, *Facultad de Ciencias Exactas y Naturales*

Universidad de Buenos Aires - Buenos Aires

Estela Muñoz, *Universidad Nacional de Cuyo - Mendoza*

Cecilia Inés Calero, *Facultad de Ciencias Exactas y Naturales,*

Universidad de Buenos Aires - Buenos Aires

Franco Mir, *Instituto Mercedes y Martín Ferreyra - Córdoba*

Ricardo Pautassi, *Facultad de Psicología, Universidad Nacional de Córdoba - Córdoba*

Course | Organizing Committee

Germán Szapiro, *Neuroscience Section, Ecole Normale Supérieure, Paris, France.*

Juan Goutman, *INGEBI-CONICET, Buenos Aires, Argentina.*

Logistic Organization: **Silvina Andrea Ceriani**

Course Program

"Electrophysiological Recordings and Optical Imaging in Neuroscience"

Tuesday, October 18th | Day 1: Electrophysiology

8.00 **Registration**

09:00 – 11:00 **Lecture I** *"Membrane potential, action potential, excitatory and inhibitory synaptic currents"* **Mariano Casado**, Neuroscience Section, IBEns (CNRS UMR 8197 / INSERM U 1024) Ecole Normale Supérieure, Paris, France

11:05 – 11:20 **Coffee break**

11:30 – 12:55 **Lecture II** *"Extracellular and intracellular solutions, basic properties, ions"* **David Ogden**, Laboratoire de Physiologie cérébrale, UMR8118, Université Paris Descartes, Paris, France

13.00 – 14:00 **Lunch**

14:00 – 18:00 **Lecture III** *"Patch clamp techniques: voltage clamp, current clamp, perforated patch"* **Mariano Casado & Marco Diana**, Institut de Biologie. CNRS UMR 8197 – INSERM U 1024. Ecole Normale Supérieure, Paris, France

18:00 – 18:30 **Coffee break**

18:30 – 20:30 **Lecture IV** *"Electronics, the construction of a (basic) amplifier and test with model cell"* **Boris Barbour**, Neuroscience Section, IBEns (CNRS UMR 8197 / INSERM U 1024) Ecole Normale Supérieure, Paris, France & David Ogden

20:45 – 21:15 **Discussion. Round table**

21.30 – 22:30 **Dinner**

Wednesday, October 19th | Day 2: Imaging

08:15 – 09:15 **Breakfast Meeting**

09:15 – 11:15 **Lecture V** *"Introduction to conventional and confocal microscopy"*
Stepahne Dieudonné, *Institut de Biologie, CNRS UMR 8197 INSERM U 1024.*
Ecole Normale Supérieure, Paris, France

11:15– 11:30 **Coffee break**

11:30 – 13:30 **Lecture VI** *"Introduction to 2-photon microscopy"* **Stepahne Dieudonné**

13:45 – 14:30 **Lunch**

15:00 – 17:00 **Lecture VII** *"Caged compounds and Ch- Rhodopsins. Principles, compounds"* **David Ogden & Marco Diana**

17:30 – 18:45 **Lecture VII** *"Voltage sensitive dyes: principles – compounds – applications"*
David Ogden

19:10 – 20:30 **9th lecture.** *"Data analysis, programs"* **Boris Barbour**

20:45 – 21:30 **Round Table**

21:45 – 22:45 **Dinner**

Meeting Program

Thursday, October 20th

8.00 **Registration**

9:00 – 9:15 **Opening**

9:30 – 12:20 **Symposium I. Non classical synaptic transmission**

- **Gabor Tamas.** *Department of Physiology, Anatomy and Neuroscience, University of Szeged. Hungary.* "Unitary volume transmission by neurogliaform cells: broadening the functional scope of single neurons"
 - **Ian Forsythe.** *MRC Toxicology Unit. University of Leicester Lancaster Road, Leicester LE1 9HN, UK.* "The role of nitric oxide in neuronal homeostasis and intrinsic plasticity"
 - **David Ogden.** *Laboratoire de Physiologie cérébrale, UMR8118, Université Paris Descartes, France.* "Metabotropic glutamate receptor signalling in cerebellar Purkinje neurons studied with flash photolysis"
 - **Boris Barbour.** *Neuroscience Section, IBEns (CNRS UMR 8197 / INSERM U 1024) Ecole Normale Supérieure, France.* "Pure spillover transmission in the cerebellum"
-

12:30 **Lunch**

14:30 – 16:20 **Young Investigators Colloquium I**

Fabricio Ballarini. *Instituto de Biología Celular y Neurociencias, Fac. de Medicina, UBA, Argentina.* "Novel lessons improve memory in elementary school children: evidence of behavioral tagging in humans"

Mario Perello. *Instituto Multidisciplinario de Biología Celular (IMBICE) (CONICET/CICPBA), Argentina.* "Ghrelin mediates stress-induced food reward behavior in mice"

Lionel Muller Igaz. *Grupo de Neurociencia de Sistemas, Dpto. Fisiología, Facultad de Medicina, UBA, Argentina.* "Novel animal models to study the role of TDP-43 in neurodegenerative disease"

Estefania Bello. *INGEBI-CONICET, Argentina.* "Mice lacking dopamine D2 autoreceptors reveal their fundamental role on dopamine neurotransmission"

16:30 – 19:00 **Poster session I**

19:30 **"De Robertis" Lecture.** **Martín Giurfa** *Centre Recherches Cognition*

Animale, CNRS, Université Paul Sabatier, Toulouse, France. «Accessing the neural bases of cognitive processing in a simple brain (that turns to be not so simple)»

21:00 **Dinner**

23:00 **Bonfire**

Friday, October 21st

8:30 – 10:20 Young Investigators Colloquium II

Fernando Sepúlveda. *Departamento de Fisiología, Universidad de Concepción, Chile. "Membrane perforation induced by AB is modulated by membrane levels of NR2B and LRP6 protein"*

Tomás Falzone. *Instituto de Biología Celular y Neurociencia IBCN-CONICET-UBA, Argentina. "Abnormal endo-lysosomal membrane dynamics and retrograde axonal transport defects induced by proteasome inhibition"*

Jesica Raingo. *Instituto Multidisciplinario de Biología Celular (IMBICE) (CONICET/CICPBA), Argentina "Alternative splicing of calcium channels adjust neuronal activity"*

Esteban Beckwith. *Fundación Instituto Leloir-IIBBA. CONICET, Argentina. "Retrograde BMP signaling modulates the pace of the circadian clock"*

10:30 – 13:00 Poster session II

13:00 Lunch

14:30 "Ranwell Caputo" Lecture. Santiago Quiroga. *Facultad de Ciencias Químicas. Universidad Nacional de Córdoba, Argentina. "Regulation of membrane expansion at the nerve growth cone: Axonal specification and elongation"*

15:30 – 18:00 Poster session III

18:00 – 20:40 Symposium II "Brain Development and Evolution"

Pasko Rakic *Department of Neurobiology. Yale University, US. "Evolution of the Neocortex: Evo-Devo approach"*

Diego Gelman. *Instituto de Neurociencias de Alicante, Spain. "Generation of cortical interneuron diversity in the mouse"*

Suzanaerculano-Houzel. *Instituto de Ciências Biomédicas-Universidade Federal do Rio de Janeiro, Brazil. "Building a bigger brain: New views on brain"*

scaling the development and evolution of mammalian brains"

Lucía Franchini. *Instituto Investigaciones Ingeniería Genética y Biología Molecular, Buenos Aires, Argentina. "Human brain evolution: searching the genetic basis underlying our unique cognitive capacities"*

21:00 **Dinner**

22:00 **Plenary meeting SAN. SfN local chapter**

24:00 **Neuro party**

Saturday, October 22nd

9:30 **Symposium III "Applied neuroscience: Music, herbs hypnosis and jokes"**
Draulio Araujo. *Instituto do Cérebro da UFRN, Universidade Federal do Rio Grande do Norte, Brazil. "Seeing with the Eyes Shut: Neural Basis of Enhanced Imagery following Ayahuasca Ingestion"*
Tristan Bekinschtein. *MRC Cognition and Brain Sciences Unit – Cambridge UK. "Neuroscience of what makes us laugh"*
Yann Cojan. *Center for Neuroscience. University of Geneva, Switzerland. "Hypnosis and the brain: investigation of hypnotic suggestions using fMRI"*
Mariano Sigman. *Departamento de Física, Universidad de Buenos Aires, Argentina. The taste of music"*

12:30 **"Héctor Maldonado" Lecture: John Hildebrand.** *Department of Neuroscience. University of Arizona, USA "Learning from Insect Brains: Explorations of a 'Simple' Olfactory System"*

13.45 **Farewell Barbecue**



SAN

SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

XXVI REUNIÓN ANUAL

SOCIEDAD ARGENTINA DE INVESTIGACIÓN EN NEUROCIENCIAS

COURSE

"ELECTROPHYSIOLOGICAL RECORDINGS AND OPTICAL IMAGING IN NEUROSCIENCE"



ISN
International Society
for Neurochemistry

CAEN-ISN

www.neurochemistry.org



IBRO-LARC

www.ibro.org



Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE
AMBASSADE DE FRANCE EN ARGENTINE



Universidad Nacional
de Córdoba

French Society for Neuroscience









SAN

SOCIEDAD ARGENTINA DE
INVESTIGACIÓN EN NEUROCIENCIAS

XXVI ANNUAL MEETING ARGENTINE SOCIETY FOR NEUROSCIENCE



OCTOBER 18-22, 2011. HUERTA GRANDE, CÓRDOBA, ARGENTINA