



SAN
Sociedad Argentina de
Investigación en Neurociencias

**First Franco-Argentinean
Symposium in Neurosciences**
and a tribute to Hersch "Coco" Gerschenfeld

25-26 November 2010

Auditorio de la Alianza Francesa
Avenida Córdoba 946
Buenos Aires, Argentina

**Organized by :
Soci t  des Neurosciences Fran aise
and
Sociedad Argentina de Investigaci n en Neurociencia**

Avant Propos

- El Consejo de Administración de la Sociedad Francesa de Neurociencias ha dado recientemente un impulso renovado a sus relaciones bilaterales con las Sociedades de Neurociencias de países de América Latina. Dentro de este marco de cooperación internacional, las Sociedades Argentina y Francesa de Neurociencias han decidido organizar conjuntamente en 2010 su primer Simposio franco-argentino de Neurociencias en Buenos Aires. En el transcurso de esta primera reunión binacional, se rendirá un homenaje al profesor Hersch Gerschenfeld quien ha hecho grandes contribuciones al desarrollo de las Neurociencias en los dos países. El programa científico del simposio incluye a varios investigadores argentinos y franceses que han sido cercanos colaboradores y amigos de "Coco" Gerschenfeld. Otros colegas, como Philippe Ascher, Philippe Deterre, Darío Protti, Torsten Wiesel o Jerry Yakel no han podido venir a Argentina pero se han asociado plenamente a este homenaje.

Este encuentro científico, es auspiciado por la Embajada de Francia en Buenos Aires, el Consejo regional para América latina de IBRO (LARC), el ITMO Neurociencias francés y el CNRS, se lleva a cabo en el salón de la Alianza francesa en Buenos Aires, y agradecemos aquí el habernos permitido organizar este encuentro en su auditorio.

Asistimos desde hace pocos años a una verdadera renovación de las relaciones científicas y universitarias entre Francia y Argentina en diversos campos, desde la física de energías extremas a la nanotecnología, desde las matemáticas a las neurociencias. Estamos particularmente entusiasmados de poder contribuir a este impulso y esperamos que este primer Simposio franco-argentino de Neurociencias sirva de estímulo para el desarrollo de cooperaciones científicas entre estudiantes, postdoctorantes e investigadores de nuestros dos países, acción que nuestro amigo "Coco" Gerschenfeld sin duda hubiese sostenido.

- Le Conseil d'administration de la Société des Neurosciences Française a donné récemment une nouvelle impulsion à ses relations avec les Sociétés de Neurosciences des pays d'Amérique latine. Dans ce cadre de coopération internationale, les Sociétés argentine et française ont décidé d'organiser conjointement en 2010 leur premier Symposium Franco-Argentin de Neurosciences à Buenos Aires. Lors de cette première réunion binationale, nous rendons hommage au feu professeur Hersch Gerschenfeld qui a grandement contribué au développement des Neurosciences dans les deux pays. Le programme scientifique de ce symposium inclut des chercheurs argentins et français qui furent, pour certains, des proches collaborateurs et amis de "Coco" Gerschenfeld. D'autres collègues, comme Philippe Ascher, Philippe Deterre, Darío Protti, Torsten Wiesel ou Jerry Yakel n'ont pu se rendre en Argentine mais se sont associé pleinement à cet hommage.

Cette rencontre, à laquelle s'associent également l'Ambassade de France à Buenos Aires, le Conseil régional d'Amérique Latine de l'IBRO, l'ITMO Neurosciences et le CNRS, a lieu au Siège de l'Alliance Française à Buenos Aires, à qui nous remercions de nous avoir accueillis dans ses locaux.

Nous assistons depuis quelques années à un véritable renouveau des relations scientifiques et universitaires entre la France et l'Argentine dans des domaines très variés, de la Physique des énergies extrêmes aux Nanotechnologies, des Mathématiques aux Neurosciences. Nous sommes donc particulièrement enthousiastes de pouvoir contribuer à cet élan. Nous espérons que ce premier Symposium Franco-Argentin de Neurosciences permettra de promouvoir la mise en place de coopérations scientifiques entre étudiants, post-doctorants et chercheurs des deux pays, une action que notre ami, "Coco" Gerschenfeld, aurait certainement soutenue.

Daniel Calvo
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Daniel E. Shulz

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Tribute to Hersch "Coco" Gerschenfeld



Born in Lwow, Poland in 1925, Hersch M. Gerschenfeld arrived in Argentina a few years later. Hersch could not be translated into Spanish, and his middle name became Mordoqueo, but he was known to most of his friends as 'Coco', a nickname from his student years in Buenos Aires. After graduating from medical school in 1952, he became a neuropathologist, spent a year in Paris working on brain tumors, and in 1957 joined the laboratory of Eduardo de Robertis. There he applied the recently developed tool of electron microscopy to the characterization of astrocytes and oligodendrocytes. However, at the International Congress of Physiology in Buenos Aires in 1959, he met Alfred Fessard, Professor at the Collège de France, who invited him to come to Paris to work with Ladislav Tauc. This collaboration was extremely successful. Tauc and Gerschenfeld showed that in molluscan neurons, acetyl-choline (ACh) can activate two types of ionotropic receptors, an excitatory one and an inhibitory one, with distinctive pharmacological properties. This opened the way to the later studies of Eric Kandel and JacSue Kehoe, showing that a given presynaptic neuron can either excite, or inhibit, or have mixed effects on its various post-synaptic targets, depending on which receptors the post-synaptic neuron expresses.

In 1962 H. M. Gerschenfeld returned to Buenos Aires, and rapidly attracted talented students, among them Dante Chiarandini and Enrico Stefani. During the next four years he produced a series of remarkable publications on molluscan neurons receptors, characterizing the ionic selectivity of the various channels opened by ACh, and providing the first description of excitatory serotonin receptors.

However, the political situation in Argentina was rapidly deteriorating and by 1966 he was forced to leave Argentina. He found a refuge in the laboratory of Steve Kuffler at Harvard Medical School, where he returned to the study of glial cells, this time using electrophysiological tools in collaboration with Monroe Cohen and Michael Dennis. Then, in 1969, he was offered a position in the French CNRS. He first worked at the University of Orsay and then, in 1971, he joined me, JacSue Kehoe, Claude Bergman and Jean Massoulié to create the Laboratoire de Neurobiologie at the Ecole normale supérieure in Paris. There he was to stay until his death.

At the Ecole normale supérieure, he attracted French students (in particular Danièle Tritsch, Philippe Deterre and Jacques Neyton) but also foreign post-docs and colleagues on sabbatical leave, among them Gordon Fain, Jorge Golowasch, Ron Harris-Warrick, Andy Ishida, Marco Piccolino, Paul Witkowsky and Jerry Yakel. He also engaged in numerous collaborations, notably with Angus Nairn and Joël Bockaert. He continued to study synaptic transmission in molluscan neurons, and in particular serotonin receptors. After identifying four receptors increasing ionic conductances, he described receptors decreasing K conductance (through cAMP production), and receptors modulating Ca channels (through cGMP production). But he also worked on the turtle retina, to which he was first attracted because of the analogy between the conductance decreases of the photoreceptors and those elicited by serotonin in some snail neurons. He then became interested in the synapses made by horizontal cells, and this led him to a long-lasting collaboration with Marco Piccolino and to the study of the gap junctions between horizontal cells, of their modulation by dopamine, and of the role of this modulation in color vision. In his last paper, with Isabel Llano and Dario Protti, he used retinal slices to analyse ganglion cell inhibitory synapses.

Born in Poland, raised in Argentina, a French citizen, Hersch Gerschenfeld had known exile but never felt bitter about his successive displacements. In fact he was at ease in all the countries where he happened to stay. When he arrived in France, he impressed everybody by his extraordinary knowledge of French literature and French history, but also by his immense scientific culture, and he became a model for many of the younger scientists. In a country that was suffering from provincialism, he helped us to see science as a world affair, and played a major role in the development of French cellular neurobiology (he was actually the first in France to use this term, brought from Kuffler's lab). Later, when his scientific authority became established, he tried to use it as justly and as efficiently as he could, taking advantage of his extraordinarily warm personality and of his sense of humor to maintain an uncommon frankness of opinion. He devoted much effort to the building of European neurobiology (he was one of the first presidents of the European Neuroscience Association). At the same time he maintained active links with the Latin-American community of neuroscientists, and of course he enjoyed repeated visits to the US, especially to Boston. He will be remembered as a scientist at large, a scientist of the world that IBRO aims to build.

Philippe Ascher

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Programa científico / Programme scientifique

Thursday 25 of November

- 8:45 - 9:15 Introduction
Diego Golombek, President of SAN
Daniel Shulz, Member of the Council, Société des Neurosciences Française
Sylvain Leonard, Scientific Attaché, French Embassy
- 9:15 - 10:00 Tribute to Hersh "Coco" Gerschenfeld, Chairman: Enrico Stefani.
Coco, **Enrico Stefani** (UCLA)
Coco: Historias de neurocientíficos Argentinos en Francia
Enrique Segura (IByME/CONICET)
- 10:00 - 10:20 **Diana Jerusalinsky** (Facultad de Medicina, UBA)
Presentación convenio y resumen de las investigaciones en colaboración con el Epstein Lab (CNRS-Univ. Claude Bernard, Lyon, France).
- 10:20 - 11:00 **Isabel Llano** (CNRS, Univ. Paris Descartes)
Activity-dependent imaging of cerebellar interneurons
- 11:00 - 11:30 Coffee Break
- 11:30 - 12:10 **Alain Marty** (CNRS, Univ. Paris Descartes)
Presynaptic miniature currents in cerebellar interneurons
- 12:10 - 12:50 **Alejandro F. Schinder** (Instituto Leloir, Buenos Aires)
Activity-dependent integration of adult-born neurons in the hippocampal network
- 12:50 - 14:50 Lunch
- 14:50 - 15:30 **Antonia Marín-Burgin** (Instituto Leloir, Buenos Aires)
Interaction among inhibitory and excitatory circuits in the hippocampus
- 15:30 - 16:10 **Oswaldo Uchitel** (IFIBYNE, FCEN, UBA-CONICET)
Role of calcium currents in the genesis of migraines.

Friday 26 of November

- 9:00 - 9:40 **Jean-Pierre Changeux** (Institut Pasteur, Paris)
Allosteric mechanisms of signal transduction mediated by the nicotinic acetylcholine receptor at the atomic level
- 9:40 - 10:20 **Cecilia Bouzat** (INIBIBB, UNS/CONICET, Bahia Blanca)
On how Cys-loop neuroreceptors work in health and disease
- 10:20 - 11:00 Coffee Break
- 11:00 - 11:40 **Ana Belén Elgoyhen** (INGEBI CONICET-UBA)
The olivococlear system: Protection of the acoustic trauma
- 11:40 - 12:20 **Marcelo Rubinstein** (INGEBI, CONICET-UBA)
Birth, life, murder and resurrection of the central control of food intake
- 12:20 - 14:20 Lunch
- 14:20 - 15:00 **Daniel Choquet** (CNRS, Univ. Bordeaux 2, Bordeaux)
Fast glutamate receptor trafficking to improve synaptic transmission
- 15:00 - 15:40 **Santiago Quiroga** (CIQUIBIC, Univ. Nacional de Córdoba)
Regulation of membrane expansion at the nerve growth cone: Axonal specification and elongation
- 15:40 - 16:00 Short break
- 16:00 - 16:40 **Christian Giaume** (INSERM, Collège de France, Paris)
Astroglial networks: properties and role in neuroglial interactions
- 16:40 - 17:20 **Gustavo Murer** (Facultad de Medicina, UBA)
Striatal adaptations in Parkinson's disease
- 17:20 - 18:00 **Pablo Kreimer** (Instituto de Estudios de la Ciencia – IEC, Universidad Nacional de Quilmes/CONICET)
International collaborations and scientific research: current tensions in Latin America
- 18:00 - 18:10 **Daniel Calvo** (INGEBI, CONICET-UBA)
Conclusions

Agradecimientos / Remerciements

- *La Comisión organizadora agradece a Isabelle Conjat y su equipo del secretariado de la Société des Neurosciences francesa y a Silvina Andrea Ceriani del secretariado de la Sociedad Argentina de Investigación en Neurociencias por su ayuda. Agradecemos igualmente a Lydie Collet (CNRS) por la realización del afiche del simposio. La conferencia del Profesor Jean-Pierre Changeux ha sido posible gracias a la participación de la Fundación Crimson.*

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La Société des Neurosciences française et la Sociedad Argentina de Investigación en Neurociencias tient également à remercier les organismes suivants pour leur soutien:



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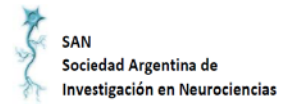
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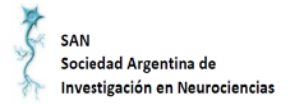
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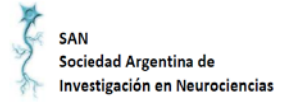
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