SHORT REPORT ISN/JNC Lectureship Award 2014

The ISN/JNC award was used to allow the attendance of Drs. Eckart D. Gundelfinger and Dr. Constanze Seidenbecher (Leibniz Institut of Neurobiology, Magdeburg, Germany) to the XXVIII Annual Meeting of the Sociedad de Biología Celular de Chile between October 26-30, 2014, in Puerto Varas – Chile (http://www.sbcch.cl/meeting/annual-meeting-2014/)

This important contribution to Chilean science was combined with an INTERNATIONAL WORKSHOP on "New views on brain synapse functions: THE EXTRACELLULAR MATRIX", held at the Universidad de los Andes in Santiago, Chile.

I) The Annual Meeting of the Sociedad de Biología Celular is the most important scientific meeting in biological sciences in Chile. Over 500 scientists and students, the most important part of the audience, participate in a meeting of excellent scientific level. The participation of Drs. Gundelfinger and Seidenbecher is specified in the Program:

19:00 – 20:00 Plenary Lecture *International Society for Neurochemistry and Universidad de los Andes*
Volcanes Room
Chair: Constanze Seidenbecher
Mechanisms of neurotransmitter release in the brain – Organization and plasticity of the active zone. Eckart D. Gundelfinger, Leibniz Institute for Neurobiology, 39118 Magdeburg, Germany. gundelfi@LIN-magdeburg.de

09:00 – 11:00 Oral Presentations III
Volcanes Room
Chairs: Patricia Burgos y Christian González-Billaut

09:45 Integrity of perisynaptic ECM in homeostatic and synaptic
Constanze Seidenbecher, Leibniz Institute for Neurobiology, AG
Extracellular Matrix, Brenneckestr. 6, 39118 Magdeburg, Germany.

In both cases, the Conference Room was full of audience and the talks finished with great interest, questions and enthusiasm of scientists and students. The Sociedad de Biología Celular de Chile and we are grateful for the support of the ISN.

II) Two days before, the **INTERNATIONAL WORKSHOP on "New views on brain synapse functions: THE EXTRACELLULAR MATRIX"** was held.

The extracellular matrix (ECM) in the central nervous system plays a key role in the regulation of neuronal function and morphology and as such affects neurite outgrowth, synapse formation and stabilisation, neuronal plasticity, learning and memory. However, the extracellular matrix is a common component of all tissues and as such, affects the functional aspects of every cell type. Thus, this workshop was oriented towards the comprehension of general knowledge about the molecular organization of the extracellular matrix and to specific knowledge related to the role of the ECM in the brain.

We brought together international and national scientists who could teach our PhD students in various aspects related to the ECM: Constanze Seidenbecher (Leibniz Institute, ECM concepts and tools and ECM in homeostatic and synaptic plasticity); Eckart Gundelfinger (Leibniz Institute, Synapses and molecular plasticity of synapses); María Paz Marzolo (Millenuim Nucleus for Regenerative Biology, Pontificia Universidad Católica de Chile, Reelin signaling pathway in cell migration and axonal regeneration); Rodrigo Herrera-Molina (Leibniz Institute, Neuroplastin and synapses); Brigitte van Zundert (Centro de Investigaciones Biomédicas (CIB) Universidad Andrés Bello, Reelin signaling and PSD-95); Estíbaliz Ampuero (Centro de Investigaciones Biomédicas (CIB) Universidad Andrés Bello, The ECM components reelin and brevican in dendritogenesis).

In total, 21 PhD students attended: 10 of them were from the PhD Program in Biomedicine of Universidad de los Andes and 11 of them were from other universities (Universidad Católica de Antofagasta, Universidad Andrés Bello and Unversidad Católica de Chile). The students were introduced to the activities and opportunities offered by the SfN, as it is shown in the following lecture slide.

Each conference was followed by 15 minutes of discussion, of common coffee breaks and a common lunch favoring interaction of students with scientists. In fact, two of our students became

interested in performing research in the Leibniz Institute in the frame of their PhD projects. This in turn helped to initiate new collaborative projects. Thus, we gratefully acknowledge the financial support received by the International Society for Neurochemistry (ISN).

Costs

Total travel costs guests: 4.800 USD
Hotel accomodation, food, transport: 2.600 USD
Assistance to the Society for Cell Biology: 1.000 USD

Residence for students (Universidad de Antofagasta): 1.200 USD

Funds

ISN support: 5.000 USD
Leibniz Institut funding: 3.600 USD
Universidad de los Andes: 1.000 USD

Ursula Wyneken, Director of the PhD Program Universidad de los Andes

Centro de Investigaciones Biomédicas (CIB)
Universidad de los Andes

WORKSHOP "New views on brain synapse functions: THE EXTRACELLULAR MATRIX"

October 21 and 22, 2014
PARTICIPANTS:
ESTIBALIZ AMPUERO (Centro de Investigaciones Biomédicas (CIB) Universidad Andrés Bello)
ECKART GUNDELFINGER (Leibniz Institute for Neurobiology, Magdeburg)
RODRIGO HERRERA-MOLINA (Leibniz Institute for Neurobiology, Magdeburg)
MARÍA PAZ MARZOLO (Millenuim Nucleus for Regenerative Biology, Pontificia Universidad Católica de Chile)
CONSTANZE SEIDENBECHER (Leibniz Institute for Neurobiology, Magdeburg)
BRIGITTE van ZUNDERT (Centro de Investigaciones Biomédicas Universidad Andrés Bello)

TALKS:

- Sherrington's legacy: What do we know? Where do we go?
- The extracellular matrix (ECM): concepts and tools.
- Inhibition of the reelin signaling pathway and PSD95 gene expression to regulate neuronal refinement in vitro and in vivo.
- Perisynaptic ECM in homeostatic and synaptic plasticity.
- ECM components reelin and brevican limit reactivation of dendritogenesis in mature hippocampal neurons.
- Expression of reelin and ApoER2 in the peripheral nervous system and their participation in Schwann cell migration and axonal regeneration.
- Neuroplastin: A synaptic cell adhesion molecule with function in synaptogenesis and synaptic plasticity.
- Pathways for synapto-nuclear communication: potential mechanisms for information storage in neurons and networks.

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