

# Workshops Current trends in Biomedicine 2010

## Cell Replacement for Regeneration in the Nervous System: Lessons from Adult Neurogenesis

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### Scope

Adult neurogenesis provides a unique model to study what a newly generated neuron needs to accomplish before taking over its function in an already pre-existing network. Failure to accomplish a sequence of distinct steps such as appropriate subtype specification, migration, dendritic and axonal outgrowth and arborization, synaptogenesis, and finally functional recruitment into behaviourally relevant circuits often dooms a new born neuron to death. There is growing evidence that the same requirements need to be fulfilled when attempting to repair damaged neuronal circuits by replacing dead with newly generated neurons, either derived from endogenously recruited stem cells or following transplantation. This poses currently an insurmountable barrier for the feasibility of cell-based therapies of neurodegenerative diseases. In this workshop on "CELL REPLACEMENT FOR REGENERATION IN THE NERVOUS SYSTEM: LESSONS FROM ADULT NEUROGENESIS" world-wide leading scientists in the field will address and discuss the most updated knowledge of what are the key requirements for a newly generated neuron to integrate and thus survive and what can be learnt from this for eventually re-installing neurogenesis in regions where neurogenesis does not occur physiologically, such as the cerebral cortex or the retina.

### Format of the Workshop

The workshop will bring together 17 speakers and a maximum of 33-35 participants, to form a group of around 50 people. The scientific programme will start in the morning of Wednesday, October 13<sup>th</sup>, and will end around noon on Friday, October 15<sup>th</sup>. Ample time for informal discussion will be reserved. Participants will be invited to present a poster.

### Venue of the Workshop

The workshop will be held in Baeza, at the "Sede Antonio Machado", a XVII century building turned into a Conference Centre of the Universidad Internacional de Andalucía (UNIA). This Seat includes a recently restored residence, where participants will be accommodated. Baeza is a World Historic Heritage town, renowned for its Renaissance and Gothic buildings.

### Organized by:

**Benedikt Berninger**  
Institute of Physiology, Ludwig-Maximilians University Munich. Munich, Germany.

**José Manuel García-Verdugo**  
Centro de Investigación Príncipe Felipe. Valencia, Spain.

**Alejandro F. Schinder**  
Leloir Institute-CONICET. Buenos Aires, Argentina.

### Speakers

**Arturo Alvarez-Buylla.** Department of Neurological Surgery, The Eli and Edythe Broad Center of Regeneration Medicine and Stem Cell Research, University of California at San Francisco. San Francisco, CA, USA.

**Paola Arlotta.** Department of Stem Cell and Regenerative Biology, Harvard University; Center for Regenerative Medicine, Massachusetts General Hospital, Harvard Medical School. Boston, MA, USA.

**Benedikt Berninger.** Institute of Physiology, Ludwig-Maximilians University Munich & Institute of Stem Cell Research, Helmholtz Zentrum München. Munich, Germany.

**Anders Björklund.** Wallenberg Neuroscience Center, Department of Experimental Medical Science, Lund University. Lund, Sweden.

**Angélique Bordey.** Departments of Neurosurgery & Cellular and Molecular Physiology, Yale University School of Medicine. New Haven, CT, USA.

**Marco Canossa.** Department of Pharmacology, University of Bologna, Bologna / Italian Institute of Technology, Genoa / Italy.

**José Manuel García-Verdugo.** Centro de Investigación Príncipe Felipe, Centro de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas, Universidad de Valencia. Valencia, Spain.

**Magdalena Götz.** Department of Physiological Genomics, Institute of Physiology, Ludwig-Maximilians University Munich / Munich Center for Integrated Protein Science CiPSM. Munich, Germany.

**François Guillemot.** Division of Molecular Neurobiology, National Institute for Medical Research. London, UK.

**D. Chichung Lie.** Research Group Adult Neural Stem Cells and Neurogenesis, Institute of Developmental Genetics, Helmholtz Zentrum München, German Research Center for Environmental Health. Munich-Neuherberg, Germany.

**Pierre-Marie Lledo.** Perception and Memory Laboratory, URA 2182, CNRS, Institut Pasteur. Paris, France.

**José López-Barneo.** Instituto de Biomedicina de Sevilla (IBiS), Hospital Universitario Virgen del Rocío/CSIC/Universidad de Sevilla. Sevilla, Spain.

**Guillermina López-Bendito.** Instituto de Neurociencias de Alicante, CSIC & Universidad Miguel Hernández. Alicante, Spain.

**Verónica Martínez-Cerdeño.** Institute for Pediatric Regenerative Medicine, UC Davis Department of Pathology. Sacramento, CA, USA.

**Guo-li Ming.** Institute for Cell Engineering, Department of Neurology, Johns Hopkins University School of Medicine. Baltimore, MD, USA.

**Alejandro F. Schinder.** Laboratory of Neuronal Plasticity, Leloir Institute-CONICET. Buenos Aires, Argentina.

**Pierre Vanderhaeghen.** Université Libre de Bruxelles (U.L.B.), Institute for Interdisciplinary Research (IRIBHM). Brussels, Belgium.

**Baeza, Spain**  
**13<sup>th</sup>-15<sup>th</sup> October 2010**

**Deadline:**  
23<sup>rd</sup> July 2010

**Venue:**  
Sede Antonio Machado  
Universidad Internacional de Andalucía  
Palacio de Jabalquinto  
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**Workshop coordinator:**  
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**More information and application:**  
<http://www.unia.es/biomedicine>