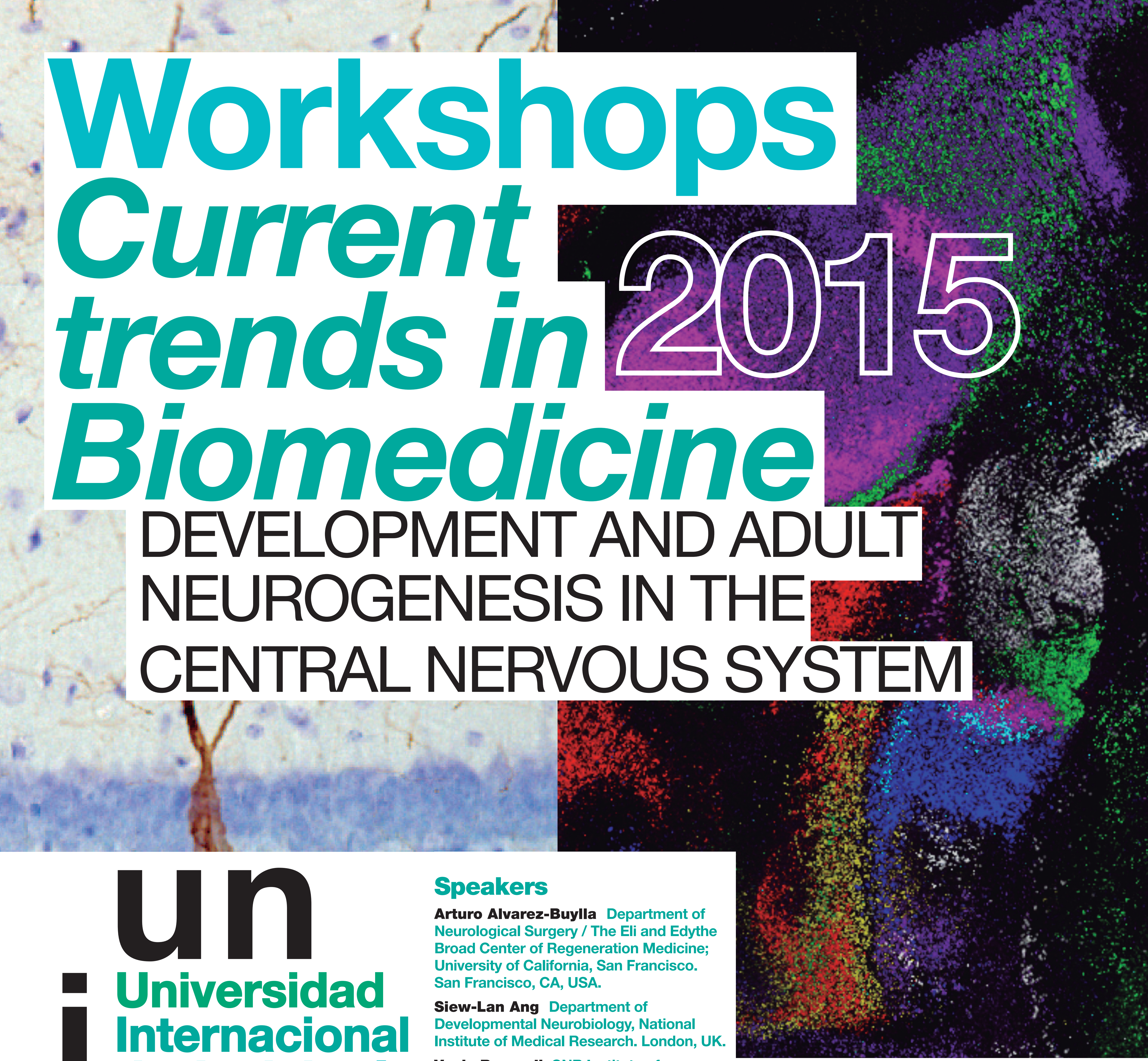

Workshops
Current trends in Biomedicine 2015

DEVELOPMENT AND ADULT NEUROGENESIS IN THE CENTRAL NERVOUS SYSTEM

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Universidad Internacional de Andalucía
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Scope

Vertebrate central nervous system (CNS) is achieved through multiple orders of developmental processes including neural induction, regionalization of the neural tube, proliferation of neural stem cells, cell type determination, and neurogenesis. Our understanding of vertebrate brain development has been deepened recently. The differentiation of the brain regions is initiated by organizing signals that regulate the expression of transcription factors, which in turn determine the regionalities. The differences in the signal strength and the competence of the recipient cells cause the differential outputs, thus regulating the differentiation of the neighboring regions. Specific type of neurons and glial cells differentiates depending on their birth place and time.

Neurogenesis in the adult brain of vertebrates was discovered half a century ago. This phenomenon has attracted much attention recently, as the newly generated neurons are integrated in already established architecture of the adult brain. This gives a hope of repairing damaged brain by explanting neural stem cells or modulating remaining adult neurogenesis.

In parallel, researchers have succeeded in making pluripotent stem cells from embryos and even from adult tissue, and are trying to reconstruct functional organ system from stem cells.

On this particular occasion, we will discuss brain development and adult neurogenesis in vertebrates. The goal is to focus in the molecular and cellular processes underlying the origin of adult progenitors and revealing conserved mechanisms that regulate neural proliferation and differentiation in embryonic and adult brain.

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 Monday, October 5th, and will end around noon on Wednesday, October 7th. 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 "Campus 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.

Speakers

Arturo Alvarez-Buylla Department of Neurological Surgery / The Eli and Edythe Broad Center of Regeneration Medicine; University of California, San Francisco. San Francisco, CA, USA.

Siew-Lan Ang Department of Developmental Neurobiology, National Institute of Medical Research. London, UK.

Vania Broccoli CNR Institute of Neuroscience and Stem Cells and Neurogenesis Unit, San Raffaele Scientific Institute. Milan, Italy.

Alain Chédotal Institut de la Vision. Paris, France.

Isabel Fariñas Departamento de Biología Celular, Universidad de Valencia / Centro de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED). Valencia, Spain.

Magdalena Götz Physiological Genomics, Institute of Physiology, Ludwig-Maximilians University. Munich / Institute for Stem Cell Research, National Research Center for Environment and Health. Neuherberg / Munich Cluster for Systems Neurology (SyNergy). Munich; Germany.

Ryoichiro Kageyama Institute for Virus Research, Kyoto University. Kyoto / Japan Science and Technology Agency, Core Research for Evolutional Science and Technology (CREST). Saitama / World Premier International Research Initiative–Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University. Kyoto; Japan.

Hisato Kondoh Faculty of Life Sciences, Kyoto Sangyo University. Kyoto, Japan.

Pierre-Marie Lledo Laboratory for Perception and Memory, Institut Pasteur and CNRS UMR 3571. Paris, France.

José López-Barneo Departamento de Fisiología Médica y Biofísica, Instituto de Biomedicina de Sevilla (IBiS), Hospital Universitario Virgen del Rocío/CSIC/ Universidad de Sevilla / Centro de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED). Sevilla, Spain.

Salvador Martínez Instituto de Neurociencias de Alicante, Universidad Miguel Hernández-CSIC. Sant Joan d'Alacant (Alicante) / Instituto Murciano de Investigacion Biomedica IMIB-Arrixaca. Murcia; Spain.

Harukazu Nakamura Institute of Development, Aging and Cancer (IDAC) / Frontier Research Institute for Interdisciplinary Science (FRIS); Tohoku University. Sendai, Japan.

Silvia K. Nicolis Department of Biotechnology and Biosciences, University of Milano-Bicocca. Milan, Italy.

Kunimasa Ohta Department of Developmental Neurobiology, Graduate School of Medical Sciences / Stem Cell-Based Tissue Regeneration Research and Education Unit; Kumamoto University. Kumamoto, Japan.

Orly Reiner Department of Molecular Genetics, The Weizmann Institute of Science. Rehovot, Israel.

John L. Rubenstein Department of Psychiatry, University of California, San Francisco. San Francisco, CA, USA.

Antonio Simeone Institute of Genetics and Biophysics "A. Buzzati-Traverso," CNR. Naples / IRCCS Neuromed. Pozzilli; Italy.

Organized by:

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Baeza, Spain • 5th-7th October 2015

Deadline:

24th July 2015

Venue:

Campus Antonio Machado
Universidad Internacional de Andalucía
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