

❖ 4th Forum of European Neuroscience

10-14 de Julho, 2004

Local: Lisboa

Comissão Organizadora:

- J. Castro-Lopes
- A. Castro-Caldas
- A. P. Carvalho
- S. Guimarães
- D. Lima
- J. Lobo Antunes
- J. Malva
- C. Oliveira
- T. Paiva
- M. Paula-Barbosa
- A. Ribeiro
- A. Sebastião
- P. Soares-da-Silva
- C. Avendano
- C. Belmonte
- H. Damasio
- F. Lopes da Silva

Programa:

10th July

13:30 - 16:45 - Technical Workshops

- *NENS workshop: networking European neuroscience graduate programmes*
Chairs: Steinbusch H. and Manahan-Vaughan D.
- *The cell cycle and neuronal differentiation*
Chairs: Harris W. A. and Tirone F.
- *Spinal cord repair: from the laboratory bench to the clinic*
Chairs: Brook G. and Franzen R.

- *Neuronal imaging using genetically encoded sensors*
Chairs: Knöpfel T.
- *Annotating the genes involved in nervous system development and function*
Chairs: Goldowitz D.
- *Engineering and application of genetic indicators in neurobiology*
Chairs: Griesbeck O. and Reigg D. F.
- *Gene therapy for pain control*
Chairs: Tavares I. F.

17:00 - 18:30 - Opening Ceremony

Advances in the biology of emotion

Damasio A. R.

11th July

8:30 - 9:30 - Plenary Lectures

Assembly and molecular organization of the active zone of neurotransmitter release

Gundelfinger E. D.

9:30 - 13:30 - Poster Session 1

9:45 - 11:15 - Symposia

- *The ageing brain*
Chairs: Barnes C. A. and De Mendonça A.
- *More than one way to kill a neuron*
Chair: Mehmet H.
- *Local and long-range neuronal interactions through oscillatory synchronization*
Chair: Fries P.
- *Decision-making and addiction: neural substrates*
Chair: Di Chiara G.

- *Intracellular mechanisms for neuritogenesis*
Chair: De Curtis I.
- *The influence of Donald O. Hebb on neuroscience today: a symposium to honour the 100th year since Hebb's birth*
Chair: Brown R. E.
- *Early experience: when does it become disruptive for brain development and behavior?*
Chairs: Cirulli F. and Levine S.
- *Synaptic plasticity and dynamic encoding in somatosensory cortex*
Chairs: Senn W. and Fusi S.

13:00 - 14:00 - Special Lectures

- FENS - EJN Award
Morris R. G. M.
- Kemali Prize 2004
Bargmann C. I.
- Hertie Foundation Lecture
Laurent G.

14:00 - 17:30 - Poster Session 2

14:15 - 15:45 - Symposia

- *Excitatory and inhibitory synaptic transmission: new modulatory roles for Ca²⁺*
Chairs: Smart T. G. and Bregestovski P.
- *Role of protein misfolding and aggregation in neurodegenerative diseases*
Chairs: Saraiva M. J. and Soto C.
- *Ischemia and neuroprotection*
Chairs: Domoki F. and Oliveira C.
- *Neuronal pre-mRNA processing*
Chair: Seeburg P.

- *Segregation and integration of sensory information in cortical circuits*
Chairs: Staiger J. F. and Fox K.
- *The function of olivocerebellar microcircuits*
Chair: De Schutter E.
- *Visuomotor functions of the dorsomedial parietal cortex in human and non-human primates*
Chairs: Galletti C. and Fattori P.
- *Understanding the distinct steps of postnatal neurogenesis*
Chairs: Bordey A. and Baker H.

15:45 - 17:15 - *Public awareness of brain research* (EDAB symposium)

Chairs: Blakemore C. and Magistretti P. J.

17:30 - 18:30 - Plenary Lectures

The contribution of the geneticist to neurosciences

Antonarakis S. E.

12th July

8:30 - 9:30 - Plenary Lectures

Neuron-astrocyte crosstalk in the central nervous system

Pozzan T.

9:30 - 13:30 - Poster session 3

9:45 - 11:15 - Symposia

- *Neuroglial signaling: the role of cytokines in inflammation and neuroprotection*
Chairs: Kettenmann H. and Boddeke H. E.
- *Loading with glutamate: novel aspects of glutamate function*
Chair: Storm-Mathisen J.

- *Control of brain development and plasticity by sex hormones*
Chair: Garcia-Segura L. M.
- *Protein partners of neurotransmitter receptors*
Chairs: Ciruela F. and Ribeiro A.
- *Spike timing in hippocampal cell assemblies*
Chair: Somogyi J.
- *Genetic and genomic approaches to the zebrafish visual system*
Chairs: Neuhauss S. C. F. and Kohler K.
- *Plasticity in central auditory processing: from neural mechanisms to behavior*
Chair: Schnupp J. W. H.
- *Transcription factors and behavior: from adaptation to pathology*
Chairs: Zachariou V. and Barrot M.

11:30 - 13:00 - FENS / European Brain Council symposium

Chairs: Olesen J. and Magistretti P. J.

12:00 - 14:00 - IPSEN Neuronal Plasticity Prize

Gusella J. F., Mandel J. L., Zoghbi H. Y.

13:00 - 14:00 - Human Frontier Science Program Lecture

Hudspeth J.

Boehringer Ingelheim - FENS Research Award

Mansuy I. M.

13:30 - 17:30 - Poster session 4

14:15 - 15:45 - Symposia

- *Physiological properties and mechanisms of neuron-astrocyte signaling in the CNS*
Chair: Araque A.
- *In vivo calcium imaging: watching neurons at work*
Chairs: Helmchen F. and Garaschuk O.

- *The perirhinal cortex: synaptic plasticity to cognitive function*
Chairs: Brown M. W. and Warburton E. C.
- *Theoretical models to understand neuronal communication*
Chairs: Deco G. and Lima D.
- *Neurogenesis in the peripheral nervous system*
Chairs: Mendes Sousa M. and Geuna S.
- *Functioning with noise*
Chair: Segev I.
- *Motor neuronal functions and dysfunctions*
Chairs: Poletti A. and Silani V.
- *Visualising synaptic plasticity*
Chair: Fine A.

17:30 - 18:30 - Plenary Lectures

Seeing and perceiving: phenomenology & physiological mechanisms

Logothetis N.

13th July

8:30 - 9:30 - Plenary Lectures

Molecular and cellular cognition: unraveling the mechanisms of memory

Silva A. J.

9:30 - 13:30 - Poster session 5

9:45 - 11:15 - Symposia

- *Fate decision processes in vertebrate neural stem cells*
Chair: Sommer L.
- *Novel approaches for cognition enhancement*
Chair: Maubach K. A.

- *Towards a molecular understanding of water transport in the brain: role of aquaporins*
Chair: Ottersen O. P.
- *Dendro-dendritic interactions in networks of hypothalamic neurons*
Chairs: Leng G. and Poulain D.
- *Short-term plasticity at excitatory synapses in the auditory system*
Chair: Turecek R.
- *Synaptic vesicle release and recycling*
Chairs: Verderio C. and Pato de Carvalho A.
- *Network dynamics and integration in nociceptive pathways: implications for pain signaling*
Chair: King A.
- *Cerebellar plasticity: not just depressing*
Chair: Casado M.

13:00 - 14:00 - Sponsored Technical Workshop "The DynafloTM Chip - A Revolution in Patch Clamp"

13:00 - 14:00 - Special Lectures

- EBBS Behavioural Brain Research Lecture
Miyashita Y.
- SPN - Pfizer Portugal Grant invited lecturer
Lopes da Silva F.
- GSK Neuroscience Award
Belmonte C.
- Max Cowan Lecture
Raisman G.

13:30 - 17:30 - Poster session 6

14:15 - 15:45 - Symposia

- *Fine-tuning of synaptic actions of neurotrophic factors*
Chair: Chao M. V.

- *The place of prefrontal cortex in psychiatric illness*
Chairs: Sesack S. R. and Artigas F.
- *Brain-computer interfaces for neuroprostheses and communication in animals and humans*
Chair: Kuebler A.
- *Regional specialization in primate cortical circuitry: implications for sensory processing*
Chairs: Defelipe J. and Elston G. N.
- *Forming an asymmetric brain: cooperation of genes and environment*
Chairs: Manns M. and Wilson S. W.
- *Attention to objects and feature in space: from the visual cortex to the frontal lobes and back*
Chairs: Treue S. and Martinez-Trujillo J. C.
- *Axonal outgrowth, regeneration and repair*
Chairs: Udina E. and Malva J.
- *Synaptic and cellular mechanisms of learned fear*
Chairs: Bolshakov V. and Lüthi A.

17:30 - 18:30 - Plenary Lectures

The gift of speech: FOXP2 and the KE family

Vargha-Khadem F.

14th July

8:30 - 9:30 - Plenary Lectures

Deciphering the molecular bases of the development and physiology of the hair bundle through deafness genes

Petit C.

9:30 - 13:30 - Poster session 7

9:45 - 11:15 - Symposia

- *Stem cell therapy in neurodegenerative disease: how to make it work?*
Chair: Lindvall O.
- *Signal integration in dendrites*
Chairs: Berger T. and Larkum M.
- *Brain imaging*
Chairs: Fabene P. F. and Lobo Antunes J.
- *Feedback mechanisms in brain function*
Chairs: Cudeiro J. and Sillito A.
- *The neurobiology of connexins: from genes to therapies*
Chair: Randall A. D.
- *Maturation of glutamatergic synapses in the developing hippocampus*
Chair: Taira T.
- *Involvement of cell adhesion molecules in the formation of functional neuronal networks*
Chairs: Nacher J. and Sandi C.
- *Kainite receptors: from control of excitability to synaptic plasticity and neurodegeneration*
Chairs: Lerma J. and Cunha R. A.

13:00 - 14:00 - Closing Lecture

Computing with neural ensembles: a new paradigm in systems neuroscience

Nicolelis M.