



**SENC**

Sociedad Española de NeuroCiencia

**Second  
Cajal Winter Conference**

**Cerebral Cortex:  
From Development to Cognition**

March 19-23, 2006  
Benasque, Huesca (Spain)

**Final Programme**

The Sociedad Española de NeuroCiencia (SENC) announces the celebration of the Second **Cajal Winter Conference**. The aim of this series of Conferences is to bring together specialists in a given area of Neuroscience, mainly from Spain, to present their recent data and discuss with world leaders in the field on common interests in an open, informal atmosphere.

### **Committees**

#### **SENC**

José María Delgado García, *President*  
Roberto Gallego, *President-elect*  
Angel Pazos, *Vice-President*  
Berta González de Mingo, *Secretary*  
Javier Yajeya, *Treasurer*  
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Guillermo Alvarez de Toledo  
Isabel Fariñas

#### **Cajal Winter Conferences**

Francesc Artigas, *chair*  
Roberto Gallego  
Salvador Martínez  
Alberto Ferrús  
Javier Cudeiro  
Jesús García-Sevilla



### **Venue and accommodation**

Benasque is a nice mountain village below the highest peak in Pyrenees, Monte Aneto (3404 m) with the ski resort of Cerler at 6 km. The Benasque valley offers unique mountain landscapes and the opportunity to strolling and hiking along many trails as well as to visit interesting ancient houses and churches. The Conference will take place in the Casa de Cultura of the Benasque City Hall, in the center of the village, very close to the hotels. The conference room is equipped with standard projection facilities. The main hotel will be Hotel Ciria (Avenida de los Tilos s/n, phone 974 551612, fax 974 55 10 80; e-mail: [hotelciria@hotelciria.com](mailto:hotelciria@hotelciria.com)). Dinners for all participants will take place at the Hotel Ciria.



## Registration

Registration costs include the conference fee for participants (150 euro) plus accommodation expenses (check-in March 19, check-out March 23). These are as follows (for participants and accompanying persons)

*Double room, single occupancy: 335 euro*

*Double room: 225 euro*

*Triple room: 210 euro*

*Quad room (penthouses): 200 euro*

Thus, the total cost of a participant wishing to stay in a double room with single occupancy is 485 euro.

Separate receipts can be made on request for the conference and accommodation expenses. SENC will take care of accommodations only during the conference days. Those participants or accompanying persons who wish to stay in the same hotel before or after the Conference must contact Hotel Ciria directly for these extra days (phone 974 551612, fax 974 55 10 80; e-mail: [hotelciria@hotelciria.com](mailto:hotelciria@hotelciria.com)).

## Cancellation

Cancellations made before March 1 will be fully refunded. Those after that date will be refunded by 80%. Cancellation notice should be sent to the secretary of SENC at [senc@uam.es](mailto:senc@uam.es).



## Conference Programme

### Sunday March 19

16:00-20:30 **Registration**

21:00 **Dinner**

### Monday March 20

15:15 *F. Artigas* Welcome address

15:30 **Oral communications.** *Chair: R. Gallego*

15:30 R. Benavides-Piccione, J. De Felipe. *The pyramidal neuron: quantitative and evolutionary aspects*

16:00 A Abellán, I Legaz, B Vernier, S Retaux, L Medina. *Evolution of the cerebral cortex: insights from the expression of developmental regulatory genes*

16:30 E. de la Peña, A Mälkiä, C Belmonte, R Gallego, F Viana. *The influence of cold temperature on cellular excitability of hippocampal networks.*

17:00 **Plenary lecture**

**Arthur Konnerth.** *Calcium waves in the developing visual cortex*

18:00 **Coffe break**

18:30 **Oral communications.** *Chair: N. Mahy*

18:30 M. Díaz-Quesada, J. Bacelo, R.S. Petersen, M.E. Diamond, M. Maravall. *Mechanisms of adaptive vibrissae motion encoding in rat barrel cortex*

19:00 P. Celada, M.V. Puig, L. Díaz-Mataix, L. Lladó, F. Artigas. *In vivo modulation of pyramidal neurons in prefrontal cortex by 5-HT receptors*

19:30 L. Díaz-Mataix, A. Bortolozzi, M.C. Scorza, M. Toth, P. Celada, F. Artigas. *Involvement of 5-HT<sub>1A</sub> receptors in prefrontal cortex in the modulation of dopaminergic activity. Role in atypical antipsychotic action*

20:00 R. Gallego, V.F. Descalzo, R. Reig, M.V. Sánchez-Vives. *Slow oscillatory activity in the olfactory cortex*

20:30 **Poster session**

21:30 **Dinner**



## Tuesday March 21

15:30 **Oral communications.** *Chair: F. Artigas*

15:30 P. Rubio-Garrido, M.J. Galazo, C. Porrero, F. Clasca. *Adult organization and development of the thalamic matrix system in the rat.*

16:00 J. Nacher. *Far beyond neurogenesis: PSA-NCAM expression in the adult cerebral cortex*

16:30 S. Martínez, L. Valdés, E. Geijo-Barrientos. *Cortical neurons of the LIS1/SLIS1 mutant mouse have electrophysiological and structural alterations*

17:00 **Plenary lecture**

**Ranulfo Romo.** *Decoding the temporal evolution of a simple perceptual act*

18:00 **Coffe break**

18:30 **Oral communications.** *Chair: F. Viana*

18:30 M.V. Sánchez-Vives, R Reig, A Compte. *Organization of activity in the cortical network during the activated states*

19:00 G. D. Puccini, M. V. Sánchez-Vives, A. Compte. *Anticipatory coding through rate-of-change computation in neuronal circuits*

19:30 G. Deco, E. Rolls. *The role of fluctuations in decision-making*

20:00 **Poster session**

21:30 **Dinner**



## Wednesday March 22

15:30 **Oral communications.** Chair: S. Martínez

15:30 L. Enríquez-Barreto, A. Fairén. *Roles of the adhesion molecule NCAM in cortical microlamination*

16:00 L. Pujadas, M. Pugliese, M.J. Rodríguez, E.E. Billett, N. Mahy. *Monoamine oxidase B as a new marker of brain stem cells*

16:30 M.J. Rodríguez, P. Robledo, C. Andrade, N. Mahy. *In vivo co-ordinated interactions between inhibitory systems to control glutamate-mediated hippocampal excitability*

17:00 **Plenary lecture**

**Migranka Sur. Development, plasticity and dynamics of visual cortex networks**

18:00 **Coffee break**

18:30 **Oral communications.** Chair: M.V. Sanchez-Vives

18:30 E. Varea, J. Nacher, E. Castillo-Gomez, M.A. Gómez-Climent, J.M. Blasco-Ibañez, C. Crespo, F.J. Martínez-Guijarro. *Neuronal structural plasticity in the medial prefrontal cortex. A role for PSA-NCAM and serotonin*

19:00 M. Pugliese, C. Andrade, J. Mascort, I. Ferrer, N. Mahy. *Similarities and differences between Alzheimer's disease and canine cognitive dysfunction syndrome.*

19:30 M Batlle, M Martínez, G Pyroti, N Mahy, MJ Rodríguez. *Acute excitotoxic lesion induces long term cellular proliferation and neurogenesis in the hippocampus of rats*

20:00 **Poster session**

21:30 **Dinner**



## Poster presentations

Posters must be mounted on the boards on Sunday or Monday and will remain on display during the whole conference. Authors should be at their posters at the end of oral sessions.

Poster size is **100 cm x 140 cm (portrait)**.

P1. S. Ardid, X.J. Wang, A. Compte. *Attention modulation by top-down sustained neural activity: a biophysically-realistic spiking network model of a reciprocal loop between MT and working memory circuit*

P2. C Gil-Sanz, A Gruart. JM Delgado-García, A Fairén. *Motor and cognitive functions in mice lacking a functional mGluR1*

P3. M. Winograd, V.F. Descalzo, M. V. Sanchez-Vives. *Persistent activity in cortical neurons supported by h-current activation*

P4. M. Slater, C. Quesada, J. Francés, M.V. Sanchez-Vives. *Multisensory integration in self-perception: The virtual arm illusion*

P5. N. Espinosa, J. Mariño, C. de Labra, J. Cudeiro. *Cholinergic and nitrenergic modulation of thalamic visual neurons: an in vivo study*

P6. A Bortolozzi, L Díaz-Mataix, MC Scorza, P Celada and F Artigas. *The activation of 5-HT<sub>2A</sub> receptors in prefrontal cortex enhances dopaminergic activity*

P7. X López-Gil, L Kargieman, Z Babot, C Suñol, F Artigas, P Celada, A Adell. *Changes in glutamatergic and serotonergic transmission in the medial prefrontal cortex after NMDA antagonism: Effects of antipsychotic drugs*

P8. J.A. Troca-Marín, Emilio Geijo-Barrientos. *Modulation by serotonin of excitatory synaptic responses evoked by callosal fibers on cortical neurons in mice*

P9. M.C. Inda, J. De Felipe, A. Muñoz. *Voltage-gated ion channels in the axon initial segment of human cortical pyramidal cells and their relationship with chandelier cells*

P10. M. Martínez de Lagrán, G. Ramakers, R. Benavides-Piccione, I. Ballesteros, J. de Felipe, M. Dierssen. *Experimental study of molecular and cellular factors affecting cortical functionality in an animal model of Down syndrome*

P11. G. Arqué, A. Casanovas, M. Dierssen. *In vivo overexpression of Dyrk1A, a candidate gene for Down's syndrome produces neuromotor developmental delay*

P12. L. Valdés-Sánchez, S. Martínez, E. Geijo-Barrientos. *Postnatal alterations of the inhibitory responses of cortical pyramidal neurons from the *lis1/slis1* mutant mouse*

P13. I. Fernández-Lamo, A. Montero-Pedrazuela, J.M. García-Verdugo, E. Rausell, A. Guadaño-Ferraz. *Thyroid hormones action in adult neurogenesis: new experimental approaches*

P14. A. Espinosa, C. Gil-Sanz, K. Obata, Y. Yanagawa, A. Fiorenza. *The early ventral pallidum: cell contributions from the thalamic eminence*

P15. R. Pla, V. Borrell, N. Flames, O. Marin. *Layer acquisition by cortical GABAergic interneurons is independent of Reelin signaling*



A group of participants at the First Cajal Winter Conference (March 2005)