



THE CENTENARY OF GOLGI AND CAJAL NOBEL PRIZE



Golgi and Cajal: two complementary views on intercellular communication in the brain 29-30 September 2006 Palace Montani Antaldi , Pesaro, Italy

Istituto Lombardo-Accademia di Scienze e Lettere, Milano

Karolinska Institutet, Stockholm

Accademia delle Scienze, Lettere e Arti, Modena

Università di Modena e Reggio Emilia

Instituto Cajal CSIC, Madrid

Universitat Complutensis, Madrid

Scuola di Dottorato in "Scienze e Tecnologie dei prodotti per la salute"

Scientific organizers:

Agnati L.F. (Modena, Italy), Fuxe K. (Stockholm, Sweden), Mora F. (Madrid, Spain)

Scientific program 30 September 2006

Session I

On the existence of a novel type of intercellular communication in the brain: Volume Transmission and its physiological and pathological characteristics

► From the Golgi-Cajal mapping to the transmitter-based mapping of the neuronal networks leading to two modes of brain communication: Wiring and Volume transmission

Kjell Fuxe, Luigi Agnati (Stockholm Sweden; Modena Italy)

► A new model of the brain networks. The global molecular networks of the brain and their links to the cellular networks of Golgi-Cajal

Luigi Agnati, Kjell Fuxe (Modena Italy; Stockholm Sweden)

► Aging of structure and communication in the cellular networks of the brain

Francisco Mora (Madrid Spain)

► The microglial networks of the brain and their role in neuronal network plasticity

Staffan Culham (Stockholm Sweden)

► Neurotensin and CDK modulate synaptic plasticity of aminoacidergic and dopaminergic striatal and mesolimbic neurons

Sergio Zanarelli (Ferrara Italy)

Session II

Integrative aspects of Wiring and Volume Transmission.

► Aspects on the postsynaptic features of transmitter release: physio-pathological implications

Fabio Benfenati (Genova Italy)

► Aspects on the postsynaptic features of transmitter release: physio-pathological implications

Francesco Clementi (Milano Italy)

► A feedforward neural logic based on synaptic and volume transmission

Bruno Apolloni, Simone Bassio (Milano Italy)

Session III

From Golgi and Cajal views to the foundations of neuroendocrinology and to the explorations of the higher brain functions

► The view of a neuroendocrinologist on the brain-peripheral organ communication

Luciano Martin (Milano Italy)

► Mental confusion and higher brain functions

Facundo Savoldi (Pavia Italy)

Session IV

Historical and epistemological aspects on Golgi and Cajal outstanding scientific contributions

► Historical aspects on the Cajal and Golgi contributions to the foundations of neuroscience

José Borrell (Madrid Spain)

► Golgi's contributions to Medicine

Umberto Muscarelli (Modena Italy)

Concluding remarks

Concluding remarks: The human brain and the place of the human being in Nature

Agnati, Fuxe and Mora (Italy, Sweden, Spain)