

EMC ONWAR-01-94-01 - Plasticity and dynamics of sensori-motor systems

Programme (brief description)

The central theme of research at the Department of Neuroscience is "Plasticity and Dynamics of Sensori-Motor Systems". This central theme is investigated by 18 groups using a variety of technical approaches, including molecular biology, cell biology and physiology, neuroanatomy, systems electrophysiology, and behavioral and clinical studies. At the systems level the research topics of the individual groups focus on transduction mechanisms or motor learning. Of special interest are the interactions of visual, auditory, vestibular or proprioceptive sensory inputs with motor outputs such as the oculomotor system, locomotion, and hand and neck movements. At the cellular level the research topics center around the synaptic mechanisms underlying these dynamic and plastic processes.

Key Figures

<i>Department</i>	<i>Sp1</i>	<i>Sp2</i>	<i>Sp3</i>	<i>Sp4</i>	<i>SpTot</i>	<i>T1</i>	<i>T2</i>	<i>T3</i>	<i>Ttot</i>	<i>IS</i>	<i>FS</i>	<i>OP</i>	<i>Ptot</i>
neurosciences	17,55	23,43	4,15	1,94	47,07								
otorhinolaryngology				0,75	0,75								
Total	17,55	23,43	4,15	2,69	47,82	5	0	0	5	68	9	0	82

Thesis

Badura, A.M. (2011, maart 30). *Impact of afferent inputs on Purkinje cell spiking patterns and motor coordination*. EUR. Prom./coprom.: Prof. Dr. C.I. de Zeeuw.

Gao, Z. (2011, juni 15). *Role of calcium in cerebellar learning and function*. EUR. Prom./coprom.: Prof. Dr. C.I. de Zeeuw.

Hermans, J.J. (2011, juni 16). *Imaging of the distal tibiofibular syndesmosis: anatomy in relation to radiological diagnosis*. EUR. Prom./coprom.: Prof. Dr. G.J. Kleinrensink.

Veldkamp, R. (2011, oktober 26). *Laparoscopic surgery for colonic cancer*. EUR. Prom./coprom.: Prof. Dr. J.F. Lange, Prof.Dr. J. Jeekel & Prof.Dr. H.J. Bonjer.

Zuiderveen Borgesius, C.H. (2011, januari 19). *Molecular mechanisms of learning, memory and aging*. EUR. Prom./coprom.: Prof. Dr. Y. Elgersma.

Article/Letter to the editor

Andreescu, C.E., Prestori, F, Brandalise, F, D'Errico, A, Jeu, M.T.G. de, Rossi, P, Botta, L, Kohr, G, Perin, P, D'Angelo, E & Zeeuw, C.I. de (2011). NR2A SUBUNIT OF THE N-METHYL D-ASPARTATE RECEPTORS ARE REQUIRED FOR POTENTIATION AT THE MOSSY FIBER TO GRANULE CELL SYNAPSE AND VESTIBULO-CEREBELLAR MOTOR LEARNING. *Neuroscience*, 176, 274-283.

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Part of book - abstract

Borst, J.G.G. & Rusu, S.I. (2011). The calyx of Held synapse. In LO Trussell, AN Popper & RR Fay (Eds.), *Synaptic mechanisms in the auditory system* (pp. 95-134). New York: Springer.