

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

Programme design in brief

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>
family practice	0,75	0	0	0	0,75								
neurology	1	0	0	0	1								
neurosciences	19,84	22,75	5,65	0,75	48,99								
otorhinolaryngology	0	0	0	0,75	0,75								
Total	21,59	22,75	5,65	1,5	51,49	11	0	0	11	43	6	1	61

Thesis

Broekhoven, P.C.A. van (2009, september 11). Cerebellar Control of Saccades in Health and Disease. EUR. Prom./coprom.: Prof.Dr. M.A. Frens.

Cupido, A. (2009, september 23). Detecting cerebellar phenotypes with the Erasmus ladder. EUR. Prom./coprom.: Prof.Dr. C.I. de Zeeuw.

Dortland, B.R. (2009, september 23). Dendritic Spine Morphology: The Role of Microtubules and Endosomes. EUR. Prom./coprom.: Prof.Dr. C.I. de Zeeuw.

Habets, R.L.P. (2009, maart 04). Release Probability of the Readily Releasable Vesicles during Short Term Plasticity. EUR. Prom./coprom.: Prof.Dr. J.G.G. Borst.

Montfoort, I. (2009, februari 04). Eye movements: a window on sensory and motor deficits. EUR. Prom./coprom.: Prof.Dr. M.A. Frens & Prof.Dr. C.I. de Zeeuw.

Richter, J.M. (2009, november 19). Computer use exposed! EUR. Prom./coprom.: Prof.Dr. M.A. Frens.

Smit, A.E. (2009, januari 21). Blinking and the Brain - Pathways and Pathology. EUR. Prom./coprom.: Prof.Dr. C.I. de Zeeuw.

Spangler, S.A. (2009, november 18). Liprin-alpha proteins regulate neuronal development and synapse function. EUR. Prom./coprom.: Prof.Dr. C.I. de Zeeuw.

Tan, M.L. (2009, september 16). Cellular mechanisms of auditory processing in the inferior colliculus, an in vivo patch clamp study. EUR. Prom./coprom.: Prof.Dr. L. Feenstra & Prof.Dr. J.G.G. Borst.

Wingerden, J.P. van (2009, november 11). Functional anatomy in low back rehabilitation. Balance in the biopsychosocial model. EUR. Prom./coprom.: Prof.Dr. C.I. de Zeeuw.

Woerden, G.M. van (2009, december 02). Role of CaMKII in synaptic plasticity, learning and disease. EUR. Prom./coprom.: Prof.Dr. C.I. de Zeeuw.

Article/Letter to the editor

Alphen, B. van, Winkelman, B.H.J. & Frens, M.A. (2009). Age- and Sex-Related Differences in Contrast Sensitivity in C57Bl/6 Mice. *Investigative Ophthalmology & Visual Science*, 50(5), 2451-2458.

Benhidjeb, T., Wilhelm, T., Harlaar, J., Kleinrensink, G.J., Schneider, T.A.J. & Stark, M (2009). Natural orifice surgery on thyroid gland: totally transoral video-assisted thyroidectomy (TOVAT): report of first experimental results of a new surgical method. *Surgical Endoscopy-Ultrasound and Interventional Techniques*, 23(5), 1119-1120.

Bosman, L.W.J. & Konnerth, A. (2009). Activity-dependent plasticity of developing climbing fiber-purkinje cell synapses. *Neuroscience*, 162(3), 612-623.

Broekhoven, P.C.A. van, Schraa-Tam, C.K.L., Lugt, A. van der, Smits, M., Frens, M.A. & Geest, J.N. van der (2009). Cerebellar Contributions to the Processing of Saccadic Errors. *Cerebellum*, 8(3), 403-415.

Buunen, M., Lange, MM, Ditzel, M., Kleinrensink, G.J., Velde, C.J van de & Lange, J.F. (2009). Level of arterial ligation in total mesorectal excision (TME): an anatomical. *International Journal of Colorectal Disease*, 24(11), 1317-1320.

Coppus, A.M.W., Fekkes, D., Verhoeven, W.M.A., Evenhuis, H.M. & Duijn, C.M. van (2009). Neopterin and the risk of dementia in persons with Down syndrome. *Neuroscience Letters*, 458(2), 60-64.

D'Angelo, E & Zeeuw, C.I. de (2009). Timing and plasticity in the cerebellum: focus on the granular layer. *Trends in Neurosciences*, 32(1), 30-40.

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- Hove, M.C.P. ten, Pool-Goudzwaard, A.L., Eijkemans, M.J.C., Steegers-Theunissen, R.P.M., Burger, C.W. & Vierhout, M.E. (2009). Prediction model and prognostic index to estimate clinically relevant pelvic organ prolapse in a general female population. *International Urogynecology Journal and Pelvic Floor Dysfunction*, 20(9), 1013-1021.
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Part of book - abstract

Holstege, G. & Collewijn, H. (2009). Central nervous system control of micturition. In C Watson, G Paxinos & G Kayalioglu (Eds.), *The spinal cord* (pp. 130-147). Amsterdam: Elsevier.