

## Program Annual Meeting 2008

Thursday, 27 November

09.00 - 09.50 Registration / coffee and tea

09.50 - 10.00 **Welcome** - Els Møst

**Didactic comments** -Ysbrand van der Werf

10.00 - 10.55 **Session 1: Brain Imaging** **chair: Dick Veltman**

Floris van Velden

*Direct quantitative comparison of HRRT and HR+ scanners: an interscanner [11C]flumazenil test-retest study.*

Nienke Dekker

*Cannabis use and callosal white matter structure and integrity in recent-onset schizophrenia.*

Jurgen Mourik

*Effects of patient movement on the analysis of dynamic PET brain studies.*

10.55 - 11.15 Printers market with coffee and tea

11.15 - 12.25 **Session 2: Electrophysiology and Visual Cortex** **chair: Freek Hoebeek**

Marijn van Wingerden

*Single unit and network coding of orbitofrontal cortex neurons during a 2-odour discrimination task.*

Silviu Rusu

*Cellular mechanisms underlying complex extracellular waveforms from the Calyx of Held synapse.*

Duco Endeman

*Cones perform a nonlinear transformation on a natural time series of intensities.*

Hadi Saiepour

*Role of  $\beta$ -catenin in functional and structural plasticity of the visual cortex.*

12.25 - 13.30 Lunch and printers market

13.30 - 14.00 **Blitz Session I** **chair: Ysbrand van der Werf**

14.00 - 15.30 **Poster Session/** Printers market

15.30 - 16.00 Printers market

16.00 - 17:10 **Session 3: Phenotyping and Biorhythm** **chair: Oliver Stiedl**

Alexander Cupido

*Detecting cerebellar phenotypes with the Erasmus Ladder.*

Annetrude de Mooij-van Malsen

*Behavioural genetics of avoidance: a mouse phenotype linked to a human mood disorder.*

Els Møst

*Skin temperature rhythms in Alzheimer's Disease and cognitive impaired elderly.*

Ellen Hessel

*Mapping quantitative trait loci for febrile seizure.*

17:10 - 17.30 Coffee and tea

17.30 - 18.40 **Swammerdam Lecture by prof dr. Rainer Goebel** **chair: Felisa van Hasselt**

*Using the BOLD Signal for communication and neurofeedback: automatic decoding of real-time fMRI data.*

18.45 - 20.30 Dinner

20.30 - 21.30 Science Quiz

## Program Annual Meeting 2008

Friday, 28 November

08.30 - 09.30 Breakfast

**Didactic comments** - Wiep Scheper

09.30 - 09.35 **Introduction** - Jelte Wouda

09.35 - 10.45 **Session 4: Age and Neurodevelopment** **chair: Jeroen Pasterkamp**

Jinte Middeldorp

*GFAP $\delta$  expression in neurogenic astrocytes in the developing and adult brain.*

Nils Zuiderveen Borgesius

*Accumulated DNA damage causes age-related cognitive decline.*

Charlotte Oomen

*Sex-dependent effects of early life stress on the hippocampus.*

Max Schlager

*Madmax coordinates exocytotic Rab6 vesicle transport and regulates neuronal development.*

10.45 - 11.00 Coffee and tea

11.00 - 11.45 **Blitz Session II** **chair: Wiep Scheper**

11.45 - 13.00 Lunch

13.00 - 14.45 **Poster Session II**

14.45 - 15.55 **Session 5: Neurodegeneration and protection** **chair: Paul Lucassen**

Elly Vereyken

*Alternatively and classically activated macrophages vary in migratory capacity and migrate differently in organotypic CNS cultures.*

Gijs Kooij

*P-glycoprotein is a novel immunomodulator in multiple sclerosis.*

Judith Gillis

*Aggregation of expanded, pure polyglutamine peptides can be inhibited by overexpression of the chaperones DnaJB6 and DnaJB8*

Marcel Raspe

*Mimicking proteasomal release of polyglutamine peptides using a novel cell-based tool*

15.55 - 16.10 **Announcement FENS 2010** - Maarten Frens

16.10 - 16.20 **Poster Award** - Maarten Frens, Nelleke Verhave and Erika van Hell

16.20 - 16.30 **Blitz and Oral Presentation Award** - Retreat committee 2008

16.30 - 16.40 **Closing remarks** - Jelte Wouda

## Blitz Session I

27 November, 13.30 - 14.00

**chair: Ysbrand van der Werf**

Nico Romeijn  
Rana Al Hussainy  
Dianne van den Heuvel  
Esther van der Zwaal  
Felisa van Hasselt  
Femke Wouters  
Hemi Malkki  
Inge van Soelen  
Jean-Pierre Sommeijer  
Nelleke Verhave  
Margreet Ridder  
Mette Somers  
Nutabi Camargo  
Priyanka Rao  
Sebastian Schagen  
Simone van den Berge

## Blitz Session II

28 November, 11.00 - 11.45

**chair: Wiep Scheper**

Anne Kan  
Hans Buitter  
Hayriye Cagnan  
Jelte Wouda  
Joanna Korecka  
Jurjen Broeke  
Kasper Roet  
Kelly Diederer  
Laura Smit-Rigter  
Marieke de Boer  
Marjolijn Mertz  
Marleen Sta  
Martijn Wokke  
Liesbeth Bijlsma  
Marek Brandys  
Danielle Counotte  
Ruben van Doorn  
Teresa Alves dos Santos  
Cathalijn Leenaars  
Willem Huijbers

**Group A**

Chair: Freek Hoebeek

- 7) Nico Romeijn  
*Skin temperature as a predictor for lapses in vigilance.*
- 8) Rana Al Hussainy  
*Synthesis of <sup>18</sup>F-labelled cubyl-WAY.*
- 9) Rebecca Schutte  
*Fast and slow spindles relate inversely to motor skills in primary school aged children.*
- 10) Rhea van de Bospoort  
*Identifying molecular mechanisms underlying secretory vesicle release in neurons.*
- 11) Ria de Haas  
*Automated detection of compulsive checking behaviour in rats.*
- 12) Rogier Poorthuis  
*Modulation of synaptic inputs to layer II/III pyramidal neurons in the prefrontal cortex by nicotine.*

**Group B**

Chair: Ysbrand van der Werf

- 13) Diana Nijholt  
*ER stress is associated with phosphorylation of tau in the pathology of Alzheimer's disease and Pick's Disease.*
- 14) Dianne van den Heuvel  
*Study to elucidate Neogenin signalling and its role in axon guidance.*
- 15) Eelke Snoeren  
*Female sexual behavior and pharmacology in serotonin transporter (SERT) knockout rats.*
- 16) Elemi Breetvelt  
*Specificity of risk factor for psychotic symptoms in the general population; ethnicity the odd one out?*
- 17) Elisa Hoekstra  
*Identifying the specific role of transcription factors Lmx1a and Lmx1b in the genetic cascade leading to mesodiencephalic dopaminergic neurons.*
- 18) Esther van der Zwaal  
*Drug-induced weight gain: effects of olanzapine in an animal model.*

**Group C**

Chair: Elly Hol

- 19) Eva Blaas  
*High-content screening of gene candidates for Parkinson's disease.*
- 20) Evelien Platje  
*The cortisol awakening response in disruptive behavior disorder compared to normal children.*
- 21) Evert-Jan Kooi  
*Abundant extracellular myelin in the meninges of patients with multiple sclerosis.*
- 22) Felisa van Hasselt  
*Maternal care influences function and morphology in the adult rat hippocampus in a sex-dependent manner.*
- 23) Femke Wouters  
*Brain activation during mental rotation in transsexual adolescents: an fMRI study.*
- 24) Fleur Zeldenrust  
*Inhibitory structures in the hippocampus.*

**Group D**

Chair: Jeroen Pasterkamp

- 31) Hemi Malkki  
*Correlations between operant learning performance and quantitative trait loci in recombinant inbred mice.*
- 32) Henrique Cabral  
*Hippocampal coding of routes and sequences on the Sarmaze in wild-type and CA1 NR-1 KO mice*
- 33) Inge van Soelen  
*The relation between attainment of motor milestones and volumetric brain measures in healthy 9-year old twins.*

- 34) Jacobine Buizer-Voskamp  
*Recurrent CNVs disrupt three candidate genes in schizophrenia patients.*
- 35) Jasper Poort  
*The role of attention in figure-ground segregation.*
- 36) Jean-Pierre Sommeijer  
*The GABA<sub>A</sub>R subunit  $\alpha 1$  is involved in but not essential for ocular dominance plasticity.*

### **Group E**

**Chair: Oliver Stiedl**

- 43) John Silvio Soria van Hoeve  
*Dynamic development of the Calyx of Held.*
- 44) Jolanda Prins  
*Triple reuptake inhibitors: behavioral and microdialysis studies in the olfactory bulbectomy model of depression.*
- 45) Joost Wiskerke  
*Differential effects of the CB1 receptor antagonist SR141716A and the FAAH-inhibitor URB597 in the 5-choice serial reaction time task.*
- 46) Jornt de Gruijl  
*Anticipatory grip force control using a cerebellar model*
- 47) Jorrit van Asselt  
*Electrophysiological characterization of Connexin 55.5. and Connexin 52.6.*
- 48) Juliane Lauks  
*Subcellular localisation of Neurobeachin.*

### **Group F**

**Chair: Sabine Spijker**

- 55) Myrre van Spronsen  
*TRAK proteins regulate trafficking of mitochondria in neurons.*
- 56) Natalia Gorionova  
*From behavior to AMPA receptors and back: neuroadaptive changes in the rat prefrontal cortex implicated in vulnerability to relapse to heroin seeking.*
- 57) Natasha Pasricha  
*The physiological role of membrane MRs in hippocampal function.*
- 58) Nelleke Verhave  
*Riluzole treatment in the marmoset MPTP model.*
- 59) Qiluan Schaafsma-Zhao  
*Endocannabinoid signalling in the prefrontal cortex.*
- 60) Margreet Ridder  
*MLC1 mutations cause dysfunction of chloride channel activity, a disturbance of volume regulation, and cerebral White Matter Edema.*

### **Group G**

**Chair: Ronald van Kesteren**

- 67) Marek Brandys  
*Genotypes and phenotypes in Anorexia Nervosa.*
- 68) Matthijs Bossong  
*Delta9-tetrahydrocannabinol induces dopamine release in the human striatum.*
- 69) Metten Somers  
*The use of Functional Transcranial Doppler ultrasound for the assessment of language lateralization. A comparison with functional MRI.*
- 70) Mike Marlatt  
*Coordinated evaluation of gliosis in the Alzheimer hippocampus through immunohistochemistry.*
- 71) Nutabi Camargo  
*Deletion of SCAP in astrocytes: the implication of disrupted lipid metabolism in the mouse brain.*
- 72) Laurens Witter  
*A look inside cerebellar cortical neurons: linking electrophysiology to morphology.*

### **Group H**

**Chair: t.b.d.**

- 79) Oswald Bloemen  
*Psychosis and autism. An in vivo magnetic resonance imaging study of brain anatomy.*

- 80) Patricia Klemmer  
*Quantitative synaptic proteomics in a mouse model for the Fragile X Syndrome reveals molecular changes underlying neurotransmission and synapse morphology.*
- 81) Pieter Goltstein  
*Plasticity and functional micro-organization of cross-modal interactions in the mouse visual cortex.*
- 82) Pieter van Bokhoven  
*Social defeat stress and subsequent antidepressant or behavioral therapy.*
- 83) Priyanka Rao  
*Quantitative proteomics of memory consolidation in two inbred mouse strains.*

### **Group I**

**Chair: Suzanne LaFleur**

- 91) Rubén Saavedra  
*Olfactory Ensheathing Glia and the regeneration of the olfactory system: involvement of phagocytosis, cholesterol recycling and modulation of the extracellular matrix.*
- 92) Sandra van der Salm  
*Normal cortical excitability yet polyphasic MEP's in myoclonus dystonia - a TMS study.*
- 93) Sebastian Schagen  
*Voxel Based Morphometry of the transsexual adolescent brain.*
- 94) Simone van den Berge  
*Neurogenic astrocytes in the adult human brain have a specialized intermediate filament network.*
- 95) Simone de Jong  
*Relating gene expression network results to behavioral phenotypes in a chromosome substitution strain F2 population in order to identify a gene underlying a QTL.*
- 96) Simon-Shlomo Poil  
*Avalanche dynamics of ongoing oscillations in vitro, in vivo and in computational models*

### **Poster Session II**

**28 November, 13.00 - 14.45**

### **Group J**

**Chair: Elly Hol**

- 1) Aleksandra Badura  
*Inhibition in the cerebellar cortex – the role of interneurons in motor learning.*
- 2) Anne Kan  
*Epileptogenic changes in a juvenile model of temporal lobe epilepsy.*
- 3) Antoin de Weijer  
*Subregions in the frontal eye fields projecting to the superior colliculus are crucial in making anti-saccades: an fMRI-DTI study.*
- 4) Aram Hossaini  
*The role of ARC expression in the spinal cord.*
- 5) Arthur de Jong  
*Visualizing synaptic heterogeneity in autaptic neurons.*
- 6) Asiya Giniatullina  
*Specific interaction of the priming factor DOC2B with PIP<sub>2</sub>.*

### **Group K**

**Chair: Jeroen Pasterkamp**

- 25) Floris Klumpers  
*Method development studies for repeatedly measuring anxiolytic drug effects in healthy humans.*
- 26) Frank Meye  
*New concepts in G-Protein coupled receptor signalling in the mesolimbic dopamine system.*
- 27) Hannemieke van der Lei  
*The relationship between genotype and phenotype in Vanishing White Matter: the influence of the second mutation.*
- 28) Hans Buitter  
*A putative radiolabeled ligand for in vivo imaging of the M1 muscarinic acetylcholine receptor by PET.*

- 29) Hans-Rüdiger Geis  
*Intracellular mechanisms underlying rate and temporal tuning to sinusoidal amplitude modulated tones in the mouse inferior colliculus.*
- 30) Hayriye Cagnan  
*Thalamic network response to oscillatory activity associated with Parkinson's disease and deep brain stimulation.*

### **Group L**

**Chair: Wiep Scheper**

- 37) Jelte Wouda  
*Operant alcohol self-administration and five-choice reaction time task performance in Wistar rats exposed to chronic alcohol during adolescence.*
- 38) Jeroen van Zanten  
*Stimulated gene expression profiles as a blood marker in antidepressant-naïve major depressed patients.*
- 39) Jeroen Melief  
*Severe multiple sclerosis is associated with low stress-axis activity.*
- 40) Ji Un Youn  
*Strain differences in passive avoidance extinction in mice.*
- 41) Joanna Korecka  
*Selecting and validating gene targets implicated in parkinson's disease development and progression.*
- 42) Jochem Cornelis  
*Identification and functional characterization of novel repressors of neuronal regeneration.*

### **Group M**

**Chair: Christian Lohmann**

- 49) Julia Meijer  
*The neuroanatomy of semantic verbal fluency deficits: implications for prediction.*
- 50) Jurjen Broeke  
*Vesicle release supports but is not essential for directed outgrowth.*
- 51) Kasper Roet  
*The applicability of bioluminescence to measure cell survival after implantation in rat spinal cord.*
- 52) Katja Ritz  
*Myoclonus-Dystonia: clinical and genetic evaluation of a large cohort.*
- 53) Kerstin Wirz  
*Characterizing the function of Neuropilin 1 and 2 in the interaction between meningeal and Schwann cells.*
- 54) Laura Smit-Rigter  
*Specific deficits in social interaction in mice lacking the 5-HT<sub>3A</sub> receptor.*

### **Group N**

**Chair: Harm Krugers**

- 61) Marieke de Boer  
*Flexibility of behavioural planning in mouse prefrontal cortex.*
- 62) Marjan Steenweg  
*L-2-Hydroxyglutaric Aciduria: pattern of MRI abnormalities in 53 patients.*
- 63) Marjolijn Mertz  
*Calcium transients in PFC axons mediated by nicotinic activation: effects of axonal Type III Nrg1 signaling.*
- 64) Marleen Sta  
*Innate and adaptive immunity in amyotrophic lateral sclerosis (ALS): evidence of complement activation.*
- 65) Marloes Joosen  
*Therapeutic efficacy of physostigmine and obidoxime in a soman-poisoned guinea pig model.*
- 66) Martijn Wokke  
*Up and down with TMS and EEG: Discriminating disruption of figure ground segregation signals in early visual areas.*

### **Group O**

**Chair: Louk Vanderschuren**

- 73) Kelly Diederer  
*Brain activation preceding the experience of auditory verbal hallucinations.*

- 74) Liesbeth Bijlsma  
*Differential role for basolateral amygdala and prefrontal cortex in CRF-induced alterations in startle reactivity.*
- 75) Linda Holtman  
*How complement protein C6 deficiency affects epileptogenesis.*
- 76) Linda Schoo  
*Ranking your cognition*
- 77) Ling Shan  
*Stable histamine production in spite of extensive Parkinson pathology in the Hypothalamic Tuberomamillary nucleus.*
- 78) Maarten Witte  
*Mitochondrial alterations in MS lesions.*

### **Group P**

**Chair: Paul Lucassen**

- 84) Cathalijn Leenaars  
*Sleep promotes instrumental learning in rats.*
- 85) Cathrin Canto  
*A comparison of neurons within the medial-, and lateral entorhinal cortex.*
- 86) Chris Schubart  
*Initial age of cannabis use and the risk of psychotic symptoms.*
- 87) Cleo Crunelle  
*Innovative approaches for cocaine pharmacotherapy: the case of rimonabant.*
- 88) Danielle Counotte  
*Synaptic proteomics of rat prefrontal cortex affected by adolescent nicotine exposure.*
- 89) Danielle van Versendaal  
*Measuring the effects of environmental enrichment on visual plasticity of adult mice by in vivo calcium imaging.*
- 90) Ruben van Doorn  
*The sphingolipid rheostat influences brain endothelial integrity.*

### **Group Q**

**Chair: Annemarie van Dam**

- 97) Teresa Alves dos Santos  
*Do Pitx3 and En1 interact in the mesodiencephalic dopaminergic (mdDA) system?*
- 98) Thaís Rizzi  
*Replication of candidate genes, locus-wide association study for IQ.*
- 99) Tony Cijssouw  
*Lifetime at the membrane: the molecular factors that influence tethering and docking of secretory vesicles at their target.*
- 100) Willem Huijbers  
*Dissociating the “retrieval success” regions of the brain: effects of retrieval delay.*
- 101) Xin Qiao  
*Anti-epileptic drug interactions with  $\alpha$ -subunits of voltage-gated Na<sup>+</sup> channels stably expressed in HEK293 cells.*
- 102) Yael Reijmer  
*Cognitive decline in type 2 diabetes mellitus: a longitudinal population-based study.*
- 103) Yasmin Namavar  
*tRNA splicing endonuclease mutations cause pontocerebellar hypoplasie.*