ONWAR ANNUAL MEETING 2013

Program Thursday November 28th

Parallel sessions:

A = Big lecture hall [room 30]  •  Daychair: Han de Jong
B = Kapelzaal [room 16]  •  Daychair: Emmeke Aarts

09.00 – 09.45  Registration/coffee&tea
09.45 – 09.55  Welcome by day chair @ big lecture hall

10.00 – 11.15  Session 1A: Addiction and motivation  •  Chair: Louk Vanderschuren
1. Roeland Struik
mGluR5 receptors and the mPFC in spontaneous recovery of nicotine seeking.
2. Rahul Pandit
Physiological alterations upon withdrawal from an obesogenic diet: implications for dieting.
3. Han de Jong
Activating specific neuronal pathways in vivo using DREADD technology.
4. Ozlem Korucuoglu
Neuronal response to alcohol tastes in adolescence: the role of OPRM1.

Session 1B: Glial disease and injury  •  Chair: Vivi Heine
5. Oscar Stassen
Glial response to mechanical injury.
6. Nawal Bahia el Idrissi
Complement inhibition is neuroprotective in a mouse model of Leprosy.
7. Melissa Lopes Pinheiro
Ceramide enriched membrane domains are important for leukocyte migration through the endothelium.
8. Marloes Prins
CCL2 and CCR2 in hippocampal lesions of Multiple Sclerosis patients.

11.15 – 11.30  Break
11.30 – 13.00  **Session 2A: Alzheimer’s disease • Chair: Elly Hol**

9. Judith van der Harg  
*The metabolic syndrome and Alzheimer’s disease: The UPR as mechanistic connection.*

10. David Hondius  
*Changes in the human hippocampal proteome during Alzheimer’s disease.*

11. Rebecca Steketee  
*Focal hypoperfusion in early dementia as assessed by arterial spin labeling magnetic resonance.*

12. Susanne van Veluw  
*Cerebral cortical microinfarcts at 7Tesla MRI in patients with early Alzheimer’s disease.*

**Session 2B: Cognitive control • Chair: Tommy Pattij**

13. Rolinka Schippers  
*Effects of deep brain stimulation on drug self-administration and impulsivity in rats.*

14. Marcia Spoelder  
*Individual vulnerability to alcohol intake in relation to decision-making.*

15. Ioannis Kramvis  
*Hyperactivity, perseveration and increased responding during attentional rule acquisition in the Fragile X mouse model.*

16. Judy Luigjes  
*Risk processing in obsessive-compulsive disorder: Differential role for insula in risk‐averse patients.*

17. Carly Sweegers  
*Memories for schema-congruent items are less detailed.*

13.00 – 14.00  Lunch

14.00 – 14.45  Blitz I

14.45 – 15.15  Printer workshop @ Kapelzaal

15.15 – 16.30  Poster Session I & Printer Market

16.30 – 18.00  Parallel session oral presentations:

**Session 3A: Neural excitability & plasticity 1 • Chair: Sabine Spijker**

18. Anna Karataeva  
*C-terminal interactors of the AMPA receptor auxiliary protein Shisa9.*

19. Jasper Stroeder  
*Shisa6 is an AMPA-receptor modulatory protein.*

20. Marta Ruiperez-Alonso  
*AMPA receptor modulatory proteins regulate receptor kinetics, long term plasticity and hippocampal neuronal network synchronization.*
21. Nikhil Pandya
Regulation of AMPA receptor by AMPA receptor interacting protein: Pancortin.
22. Karen Carney
Proteomic analysis of perisynaptic astrocytes in synaptic plasticity.

**Session 3B: Novel Methods • Chair: Joost Verhaagen**

23. Emmeke Aarts
The problem of dependency: how to avoid spurious effects and increase power in neuroscience studies.

24. Loek van der Kallen
Using CAGE-sequencing to measure hippocampal gene expression in NFIL3 Knock-Out mice during consolidation and reconsolidation.

25. Stefan Hoyng
Developing an immunologically-inert reverse tetracycline controlled lentiviral vector for gene therapy.

26. Joachim Kutzer
Finding protein-protein interactions in immunoprecipitation data.

18.00 Dinner
20.00 Evening program: Stand up for Science!
Program Friday November 29th

Parallel sessions:

- **A** = Big lecture hall [room 30]  • Daychair: Mohit Dubey
- **B** = Kapelzaal [room 16]  • Daychair: Daniela Herrera Moro

8.00 – 9.15  Breakfast

9.15 – 10.00  Blitz II

10.00 – 10.10  20 years ONWAR PhD retraite

10.10 – 11.10  Poster session II

11.10 – 12.25  **Session 4A: Memory, depression and stress • Guus Smit**

  27. Sanne Menning  
  *Pretreatment fMRI during planning and memory in breast cancer patients.*
  28. Myrle Stouten  
  *Late effects of cancer treatment on cognitive function and white matter in breast cancer survivors.*
  29. Juan Zhao  
  *Depression and suicide.*
  30. Roel Mocking  
  *Fatty acid metabolism in psychiatry.*

**Session 4B: Sensory and motor systems – visual cortex • Chair: Alexander Heimel**

  31. Tafadzwa Sibindi  
  *On the linearity of optokinetic and vestibulo-ocular reactions to novel sum of sine stimuli: What does the compensatory eye movement system really care about?*
  32. Bruno Dagnino  
  *Feedforward and feedback propagation of electrically induced activity in the visual cortex.*
  33. Niels Kloosterman  
  *Pupil dilation reflects specific perceptual alternations in a bistable visual illusion.*
  34. Roy Cox  
  *Information processing during sleep.*

12.25 – 13.25  Lunch
13.25 – 15.00  **Session 5A: Neural excitability & plasticity 2 • Chair: Gerard Borst**
35. Margherita Farina
   *Neuronal dense core vesicles capture and release.*
36. Julia Kurps
   *Vti1a promotes the biogenesis of large dense core vesicles in chromaffin cells.*
37. Johan Winnubst
   *Spontaneous network activity during development drives the clustering of temporally-related synaptic inputs.*
38. Cillian King
   *Characterization of a Novel Synaptic E3-ligase.*
39. Tiantian Wang
   *CACNA1A channel activation raises basal [Ca2+]i and generates a synaptic gain of function in a model of severe familial hemiplegic migraine.*

**Session 5B: Parkinson’s – dopamine • Chair: Ronald van Kesteren**
40. Jesse Veenvliet
   *Molecular basis for dopaminergic neuron diversity.*
41. Karlijn Doorn
   *Microglial activation beyond the substantia nigra in Parkinson’s disease.*
42. Niels Gerrits
   *Cognitive dysfunction in Parkinson’s disease.*

15.00 – 15.15  Break
15.15 – 16.15  **Swammerdam Lecture by Gert Holstege** (Center for Urology, Faculty of Medical Sciences, University of Groningen)
   *The central nervous system control of pelvic organs.*
16.15 – 16.45  Awards & Closing remarks
Blitz session I – Thursday 28 November 2013, 14.00 – 14.45

Willemieke Kouwenhoven
Simone Mesman
Peter Quinn
Wendy Timmermans
Girish Kedar
Mariette Lenselink
Fatima Farzana
Leanne Schmitz
Mohit Dubey
Eline Zaaijer
Eva Naninck
Lara Wierenga
Iris Overwater
Marijn Schouten
Iván Chavarriá-Síles
Daniela Camillo
Jorrit Montijn
Andrius Plauska
Danique Jeurissen
Daniela Herrera Moro Chao
Bart te Lindert
Koen van Lith
Yan Su

Blitz session II – Friday 29 November 2013, 9.15 – 10.00

Maria Renner
Enqi He
Mieke de Jager
Arie van Vliet
Stephanie Dooves
Nathaly Espitia Pinzón
Veerle Eggens
Sovann Kaing
Josta Kevenaar
Marta Esteves da Silva
Hui Xiong
Tanja Su
Judy van Hemmen
Mustafa Hamada
Sizar Kamar
Gerben Klein
Yoshiyuki Onuki
Marit Arp
Devavrat Vartak
Joerg Schreiber
Berend van der Wildt
Richard Hardstone
Anouk Schrantee
POSTER SESSION I: THURSDAY 28 NOVEMBER 2013, 15.15-16.30

Group A: Development: Transcription factors
1. Willemieke Kouwenhoven
Homeodomain transcription factor Engrailed 1 plays a dominant role in early embryonic mid-hindbrain patterning
2. Callan Attwell
Combinatorial expression of regeneration associated transcription factors in a high throughput F11 neurite outgrowth assay
3. Prisca Leferink
The development of genetically fixed human iPSC-derived GPCs for a transplantation therapy for VWM
Laura van Velzen
Erik van Heesbeen

Group C: Development: iPSCs
1. Simone Mesman
Mesodiencephalic dopaminergic (mdDA) neuronal specification is independent of GLI2A-mediated SHH-signaling and under the direct influence of canonical WNT signaling
2. Shashini Munshi
Ca2+ imaging of 3D human neurons derived from patient-specific induced pluripotent stem cells cultured in microfluidics-based chambers
3. Dwayne Holmes
Generation of iPSCs from patients with 4H syndrome
4. Anna Bennis
Toward stem cell based therapy for diseases which affect the retinal pigment epithelium
5. Peter Quinn
Gene expression analysis of Crb1Crb2 KO mouse retinas using RNASeq
Iliana Michailidou
Martijn Sierksma

Group E: Synaptic function
1. Wendy Timmermans
Hormonal regulation of synaptic transmission and structure
2. Girish Kedar
The Synaptotagmin-1 R398,399Q mutation known to block exocytosis supports normal docking of large dense core vesicles
3. Mariette Lenselink
Strain differences in presynaptic function: proteomics, ultrastructure and physiology of hippocampal synapses
4. Fatima Farzana
The role of Neurobeachin and SAP102 Interaction in the synapse
Quentin Bourgeois
Claudia Persoon

Group G: Cellular mechanisms I
1. Wobbie van den Hurk
Why do mitochondria carry AMPA receptors?
2. Leanne Schmitz
Identification of the novel AMPAR interacting protein shisa 7
3. Anne-Lieke van Deijk
The role of glial lipid metabolism in neuronal plasticity: towards dietary modulation of synaptic function

4. Mohit Dubey
A mouse model for MegalencephalicLeukoencephalopathy with subcortical Cysts

5. Lana Osborn
Disturbances in astrocytic modulation of synaptic efficacy in Alzheimer's

**Group I: Neuroimaging: function networks**
1. Maik Derksen
Effects of deep brain stimulation on functional connectivity in rat brain circuits

2. Rozanna Meijboom
Increased default mode network activation in patients with phenocopyfrontotemporal dementia as measured with resting state functional MRI

3. Louise Pape
Distinct resting state network correlates for specific dimensions of adolescent psychopathic traits

4. Ruben Schmidt
Structural motor network alterations and changed functional dynamics in ALS

**Group K: Disorders of the nervous system: dopamine**
1. Linde Boekhoudt
DREADD-regulated modulation of dopaminergic activity in TH-Cre rats – modelling psychiatric endophenotypes?

2. Eline Zaaijer
Naltrexone has no effect on body weight, food intake, nocturnal locomotor activity and striatal dopamine transporter availability in rats

3. Sanne Verkooijen
Determinants of increased BMI and blood pressure in bipolar disorder

4. Iván Chavarría-Síles
Link between schizophrenia and white matter integrity is mediated by myelination-related genes

5. Ruud van Zessen
Optogenetic modulation of ventral tegmental area dopaminergic and GABAergic neurons affects cue- reward seeking

**Catia Silva**

**Group M: Development& stress**
1. Manila Loi
Post-weaning treatment with mifepristone reverses maternal deprivation-induced suppression of neurogenesis

2. Eva Naninck
The role of nutritional and epigenetic programming in the lasting effects of chronic early-life stress on hippocampal neurogenesis and function

3. Lara Wierenga
Development of basal ganglia, hippocampus, amygdala and cerebellum from age 7 to 24

**Bart Appelhof**
**Iris Wever**
**Ferdy Cayami**

**Group O: Epilepsy I**
1. Iris Overwater
Randomised clinical trial of rapamycin in children with TSC and intractable epilepsy (RATE-trial)
2. Valentina Iori
miR146a-mediated control of brain inflammation: a new therapeutic opportunity in epilepsy

3. Marijn Schouten
Proteomics analysis of kainic acid-induced changes in the adult mouse dentate gyrus reveals microRNAs as regulators of hippocampal neural stem cell apoptosis

Daniel Twohig

Group Q: Visual processing
1. Jorrit Montijn
Visual awareness in mouse V1
2. Premnath Thamizharasu
Thalamic input in adult visual plasticity
3. Danique Jeurissen
Object-based attention spreads at multiple spatial scales

Guido Meijer

Group S: Early visual processing
1. Mehran Ahmadlou
Visual contextual modulation in the mouse superior colliculus
2. Daniela Camillo
Two-photon calcium imaging of surround suppression in mouse V1
3. Andrius Plauska
Tuning to interaural timing differences of principal neurons in the gerbil medial superior olive

Javier Emperador-Melero

Group U: Neuroendocrinology
1. Anneloes Opperhuizen
Effects of daily timing of food intake on the hypothalamic orexin system
2. Daniela Herrera Moro Chao
Hypothalamic and Brainstem structures involved in the beneficial effects of iminosugars on metabolic syndrome
3. Zhi Zhang
Effects of local hypothalamic thyrotoxicosis on the hypothalamo-pituitary-thyroid (HPT) axis and energy metabolism
4. Kim van Elst
The role of dietary fatty acids in the pathogenesis and treatment of autism spectrum disorders

Kit-Yi Yam

Group W: Cognition & Behavior
1. Bart te Lindert
Systematic evaluation of alertness promoting factors in health and disease
2. Koen van Lith
Influencing hampered fear conditioning by an attention intervention
3. Mendelt Luinenburg
Inhibition of mPFC pyramidal cells in attention
4. Lotte Houtepen
The acute stress response in Bipolar Disorder

Jorim Tielbeek
Josjan Zijlmans
Abdel Abdelgabar
Group Y: Neuroendocrinology & Neuroimmunology
1. Yan Su
Effects of adrenalectomy on day/night rhythms in gene expression in rat suprachiasmatic nucleus, paraventricular nucleus of the hypothalamus and white adipose tissue
2. Bienneke Janssen
Synthesis of [11C]A-740003 as PET tracer for P2X7 receptor imaging for in vivo study of activated microglia
3. Marleen van Coevorden
Autoimmune encephalitis: a search for novel neuronal surface autoantigens
4. Renske Raaphorst
Synthesis of an 18Flabelled analogue of the P-glycoprotein substrate PET tracer verapamil
Hai Yin Hu

POSTER SESSION II: FRIDAY 29 NOVEMBER 2013, 10.10-11.10

Group B: Development: brain patterning
1. M.S. Hamada
Grey matter demyelination causes anomalous action potential initiation
2. Gertjan Houwen
Characterization of spontaneous network activity in the mouse developing cortex in vivo
3. Martijn Kool
A crucial role for CaMKII in survival
4. Kim Dekker
Improving sleep by synchronizing the clocks
Janske Willems
Ananya Chakraborty
Alexandra Leighton

Group D: Visual system
1. Marlou Kooiker
Assessment of visual orienting responses in children with cerebral visual impairment: methodology and reliability
2. Gijs Thepass
Saccadic reaction times and retinal responsiveness as a measure for visual improvement following cataract surgery
3. Wisse van der Meijden
The effect of red and blue light exposure on pupil diameter and vigilance
4. Paul Mertens
Behavioral paradigm for in vivo electrophysiology of audiovisual integration in the rat
Jovana Kovacevic-Divljakovic

Group F: Synaptic plasticity
1. Cátia Frias
Two-photon microscopy of dynamic changes in inhibitory axons induced by Sema4D
2. Niels Reinders
Amyloid beta selectively targets inactive synapses
3. Maria Renner
Synaptic AMPA receptor plasticity in hippocampal memory formation
4. Enqi He
Post-docking role of Munc18 in synaptic vesicle release
Group H: Epilepsy II
1. Jeffrey Stedehouder
   Modelling autism in the Caspr Ex22 mouse
2. Pascal Bielefeld
   A possible role for glucocorticoids in seizure development
3. Sicco de Knecht
   The balance between excitation and inhibition in the mouse hippocampus
Laura-anne Grimbergen

Group J: Alzheimer's disease
1. Mieke de Jager
   The blood-derived transglutaminase Factor XIII forms complexes with Abeta and is both present and catalytically active in Abeta deposition in cerebral amyloid angiopathy
2. Casper de Boer
   Differences in visuomotor profile between Alzheimer's and Parkinson's disease patients
3. Andrea Rosenberger
   Altered distribution of EphA4 in hippocampal brain tissue of patients with Alzheimer’s disease correlates with tau pathology
4. Sandeep Golla
   Quantification of [18F]DPA-714 binding in the human brain: initial studies in healthy controls and Alzheimer’s disease patients
Ulf Schnabel

Group L: Neurodegenerative disorders
1. Arie van Vliet
   The role of Wnt5a in peripheral nerve regeneration
2. Céline Heldring
   Increased hippocampal extracellular matrix causes cognitive decline in a mouse model of Alzheimer’s disease
3. Stephanie Dooves
   Vanishing White Matter-mutated astrocytes impair oligodendrocyte maturation in vitro
4. Nathaly Espitia Pinzón
   Astrocyte-derived TG2 contributes to ECM production and aggregation, and cell adhesion
Mona Irmischer
Eline Willemse

Group N: Genetic disorders
1. Eline Hamilton
   Hypomyelination with Atrophy of the Basal Ganglia and Cerebellum (H-ABC): further delineation of genotype and phenotype
2. Veerle Eggens
   Genotype-phenotype correlations in EXOSC3 mediated pontocerebellar hypoplasia
3. Tatiana Cerveira
   Absence of Munc18-1 leads to a condensed Cis-Golgi preceding neuronal cell death
Jolet van de Bree
Ulrike Filp

Group P: Developmental disorders: live-cell imaging
1. Ricardo Paap
   oxO6 in control of murine cortical radial migration via regulation of axon guidance
2. Sovann Kaing
   FOXO4 involvement in the pathophysiology of aged-related macular degeneration (AMD)
3. Josta Kevenaar
Loss of neuronal transport regulation underlies Goldberg-Shprintzen syndrome
4. Marta Esteves da Silva
Controlled delivery of AMPA receptors-containing recycling endosomes to excitatory synapses
5. Hui Xiong
Hormonal Regulation of AMPA receptor function

Group R: Developmental disorders: neuroimaging
1. Tanja Su
Brain changes and cognitive function in HIV-positives with undetectable plasma HIV-viral load
2. Cheima Bouziane
The effects of Psychotropic drugs On Developing brain (ePOD) study objectives and methods of a neuroimaging study
3. Judith Suttrup
How language can facilitate mentalizing in high functioning autistic adults: an fMRI study
4. Judy van Hemmen
The role of the androgen receptor in the sexual differentiation of the brain: a mental rotation fMRI task in women with CAIS

Rick Wassing

Group T: Visual perception
1. Sizar Kamar
Functional properties of photoreceptors in cultured human retina
2. Gerben Klein
Behavioral paradigm to study visual awareness
3. Mariska van Lier
The role of NF1 in ocular dominance plasticity

Daniel Amado Ruiz

Group V: Learning mechanisms
1. Yoshiyuki Onuki
The interaction between anterior cingulate cortex and cerebellum in the subjective confidence against the memory retrieval
2. Marit Arp
Role of forebrain mineralocorticoid receptors in spatial navigation and fear learning
3. Esther Remmelink
A novel task to assess reversal learning in mice in a home cage environment
4. Devavrat Vartak
Role of neuromodulators in working memory
5. Joerg Schreiber
TRIM3 is a synaptic E3 ubiquitin ligase that regulates hippocampus-dependent learning

Group X: Disorder of the nervous system
1. Hripsime Snkhchyan
ABC transporters P-gp and BCRP are reduced in capillary cerebral amyloid angiopathy
2. Lisanne Wisse
Molecular mechanism of Vanishing White Matter
3. Berend van der Wildt
Radiolabeling of a tissue transglutaminase inhibitor

Linda van Keimpema
Swati Arora
Group Z: Learning & behavior
1. Richard Hardstone
Critical-state dynamics of spontaneous oscillations leads to optimal range of evoked responses
2. Jessy Possel
The neural basis of dual task interference
3. Suman Das
Unraveling the mechanistic pathway of trans-cranial direct current stimulation (tDCS) in cerebellar learning
  Roel de Haan
  Myrthe Ottenhoff

Group AA: Psychiatric disorders
1. Tim Kroon
Cortical network development in a mouse model for intellectual disability
2. Anke Hammerschlag
Functional gene set analysis for Attention Deficit Hyperactivity Disorder (ADHD)
3. Chris Vriend
Reduced dopamine transporter binding predates impulse control disorders in Parkinson's disease
4. Anne Marije Kaag
Differential effects of short- and long-term cocaine use on cortical volume, thickness and surface area
5. Anouk Schrantee
J-difference edited GABA-MRS in regular amphetamine users in the basal ganglia