ONWAR ANNUAL MEETING 2014

Program Thursday November 27th

Parallel sessions:

- A = Big lecture hall [room 30]  • Daychair: Iris Overwater
- B = Kapelzaal [room 16]  • Daychair: Anneloes Opperhuizen

09.00 – 09.45  Registration/coffee&tea

09.45 – 09.55  Welcome by day chair @ big lecture hall

10.00 – 11.30  Session 1A: Synaptic transmission and plasticity • Chair: Corette Wierenga

1. Girish Kedar
   A post-docking role of Synaptotagmin-1 C2B base domain in LDCV secretion chromaffin cell.
2. Fatima Farzana
   Neurobeachin regulates glutamate- and GABA-receptor targeting to synapses via distinct pathways.
3. Maria Renner
   Norepinephrine drives a massive and transient activation of GluA3-containing AMPA receptors during anxiety states.
4. Enqi He
   MicroRNA137 over-expression regulates synaptic transmission by a presynaptic mechanism.
5. Mustafa Hamada
   Grey matter demyelination in cuprizone mouse model causes spontaneous network excitability and anomalous ectopic spike generation.

11.30 – 11.45  Break

Session 1B: Hormones and stress • Chair: Paul Lucassen

6. 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.
7. Judy van Hemmen
   Gonadal hormones, sex chromosomes and sexual differentiation of the human brain.
8. Marit Arp
   Emotional learning and memory in male C57Bl6j mice after early-life stress.
9. Eva Naninck
   A role for essential micronutrients in programming the lasting effects of chronic early-life stress?
10. Sofia Kanatsou
    Mineralocorticoid receptors as genetic resilience factor under chronic stress?
11.45 – 13.00 **Session 2A: Brain development and regeneration** • Chair: Joost Verhaagen
11. Ricardo Paap
*FoxO6 regulates PlexinA4 mediated cortical migration during embryonic development of the cortex.*
12. Simone Mesman
*A role for Mest/Peg1 in midbrain dopaminergic development.*
13. Willemieke Kouwenhoven
*Engrailed 1 shapes the dopaminergic landscape anterior and the serotonergic territory posterior to the mid-hindbrain border.*
14. Arie van Vliet
*Wnt’s in peripheral neuroregeneration.*

**Session 2B: Astrocytes in disease** • Chair: Rogier Min
15. Anne-Lieke van Deijk
*The role of glial lipid metabolism in synaptic plasticity.*
16. Mohit Dubey
*“Astro-Dam” brain ion-water management system.*
17. Stephanie Dooves
*Transplantation of glial progenitor cells in a mouse model of Vanishing White Matter disease.*
18. Nathaly Espitia Pinzon
*Inflammatory conditions regulate tissue Transglutaminase expression and function in astrocytes.*

13.00 – 14.00 Lunch

14.00 – 14.45 Blitz I

14.45 – 15.00 Workshop I: *“From Ideas to Design” @ big lecture hall*

15.00 – 15.15 Workshop II: *“Lay-out, Printing and Publishing of Theses” @ big lecture hall*

15.15 – 15.45 *’How to Publish your Research’ market and Lottery @ big lecture hall*

15.45 – 16.45 Poster session I

16.45 – 18.00 **Session 3A: Brain disorders** • Chair: Truus Abbink
19. Veerle Eggens
*Mutation in RNA kinase CLP1 causes neurodegeneration.*
20. Mieke de Jager
*The blood-derived transglutaminase Factor XIII colocalises with Aβ deposition in cerebral amyloid angiopathy and forms complexes with Aβ in vitro.*
21. Berend van der Wildt
*Synthesis and evaluation of peptidic 18F labeled TG2 inhibitors as potential PET tracers for imaging active TG2 in vivo.*
22. Daniela Herrera Moro Chao
*Hypothalamic and brainstem structures involved in the beneficial effects of iminosugars on metabolic syndrome.*
Session 3B: All eyes and ears • Chair: Maarten Kamermans

23. Andrius Plauska  
*Binaural response prediction from monaural inputs in the gerbil Medial Superior Olive.*

24. Sizar Kamar  
*Functional properties of photoreceptors in cultured human retina.*

25. Peter Quinn  
*RNA-Seq mediated transcriptome and morphological analysis of early developmental Crb1Crb2 mutant retina on a pure C57BL/6J genetic background.*

26. Sovann Kaing  
*FOXO4 involvement in the pathophysiology of aged-related macular degeneration (AMD.)*

18.00-19.30 *Let’s Talk about Science, Baby!* @ big lecture hall

   First Speaker/Chair: Dr. Karl Dittrich, Chairman of VSNU  
   Followed by peer-moderated group discussions

19.30  Dinner

21.00  Evening program: "Awesome nerds: the sing off"
Program Friday November 28th

Parallel sessions:

- A = Big lecture hall [room 30]  •  Daychair: Anne Marije Kaag
- B = Kapelzaal [room 16]  •  Daychair: Sicco de Knecht

8.00 – 9.15  Breakfast
9.15 – 10.00  Blitz II
10.00 – 11.00  Poster session II
11.00 – 12.30  Session 4A: Brain activity & disorders • Chair: Erwin van Vliet
   27. Josta Kevenaar
   Loss of KBP-mediated kinesin regulation underlies Goldberg-Shprintzen syndrome.
   28. Avanita Prabowo
   Molecular features of long-term epilepsy-associated tumors: focus on glioneuronal
tumors.
   29. Marijn Schouten
   Mitochondrial pro-apoptotic proteins are target of cooperative microRNA regulation in
early stages of adult hippocampal neurogenesis induction after status epilepticus.
   30. Iris Overwater
   Randomised clinical trial of rapamycin in children with TSC and intractable epilepsy.
   31. Richard Hardstone
   Critical-state dynamics of spontaneous oscillations leads to optimal information
processing.

Session 4B: Visual Processing • Chair: Umberto Olcese
32. Daniela Camillo
   Lack of functional specialization of neurons in the mouse primary visual cortex that
have expressed calretinin.
33. Jorrit Montijn
   Neuronal network recordings with two-photon calcium imaging during a visual
detection task reveal neuronal population correlates of visual perception in mouse V1.
35. Danique Jeurissen
   Perceptual organization and object-based attention in the human visual system.
36. Yoshiyuki Onuki
   Visual-tactile cross-modal learning during sleep.

12.30 – 13.30  Lunch
13.30 – 15.15  **Session 5A: Psychiatric disorders • Chair: Femke de Vrij**

37. Anouk Schrantee  
*Effects of dexamphetamine on fronto-striatal network connectivity in recreational users.*

38. Eline Zaaijer  
*Striatal dopamine transporter availability in heroin dependent patients: before and during treatment with extended-release naltrexone.*

39. Laura Koenders  
*Brain volumes in recent onset schizophrenia patients with and without a cannabis use disorder. A structural MRI study.*

40. Koen van Lith  
*(f)MRI correlates of antisocial behaviour and psychopathic traits in adolescents: Preliminary results.*

41. Roel Mocking  
*Longitudinal relationship of fatty acid metabolism with the hypothalamic-pituitary-adrenal axis in depression: prospective association with paroxetine response.*

42. Chris Vriend  
*Parkinson's many faces: Imaging neuropsychiatry in Parkinson's disease.*

**Session 5B: Memory • Chair: Harm Krugers**

43. Hui Xiong  
*Corticosteroid regulation of AMPA receptor mediated synaptic function.*

44. Leanne Schmitz  
*Identification of the novel AMPAR interacting protein shisa 7.*

45. Behdokht Hosseini  
*Arc expression identifies the lateral amygdala fear memory trace.*

46. Mariette Lenselink  
*Familial hemiplegic migraine type 1 mutant mice show cognitive impairment in hippocampal memory tasks.*

47. Devavrat Vartak  
*Role of NMDA and AMPA neuromodulators in working memory.*

15.15 – 15.30  Break

15.30 – 16.30  Swammerdam Lecture by Idan Segev (Lab for Understanding Neurons, Hebrew University of Jerusalem)

*What did we learn from the Blue Brain Project?*

16.30 – 17.00  Awards & closing remarks
Blitz session I - Thursday 27 November 2014, 14.00 - 14.45

Pascal Bielefeld
Tatiana Cerveira
Céline Heldring
Niels Reinders
Tim Kroon
Sicco de Knecht
Jeffrey Stedehouder
Anne Marije Kaag
Rozanna Meijboom
Sai Venkat Sandeep Golla
Renske Raaphorst
Marleen van Coevorden
Bieneke Janssen
Zhi Zhang
Anneloes Opperhuizen
Kim Dekker
Amber Kerkhofs

Blitz session II - Friday 28 November 2014, 9.15 - 10.00

Dwayne Holmes
Shashini Munshi
Anna Bennis
Callan Attwell
Lisanne Wisse
Casper de Boer
Lana Osborn
Eline Hamilton
Sietske Kevelam
Anke Hammerschlag
Marlou Kooiker
Mehran Ahmadlou
Mariska van Lier
Judith Suttrup
Esther Remmelink
Wisse van der Meijden
Paul Mertens
Ivana Milojevic
Abdel Abdelgabar
Poster session I - Thursday 27 November 2014, 15.45 - 16.45

Group A: Neuronal development I

1. Yingying Han
   Effect of oxytocin in empathy for pain

3. Hendrikus Johannes van Heesbeen
   Epigenetic mechanisms in midbrain development and maintenance

4. Pascal Bielefeld
   A possible role for the 5HT3a receptor in controlling migratory behavior of newborn granule cells in the adult hippocampus

   Ricardo Paap
   Simone Mesman
   Clara Berenguer Escuder
   Maija Koskinen
   Veronne de Vrind

Group B: Synapse

5. Claudia Persoon
   Molecular mechanism of neuropeptide secretion in the brain: are RIM proteins involved?

7. Catia Silva
   Mitochondrial dynamics in synapse development

8. Tatiana Cerveira
   Loss Munc18-1 leads to Golgi abnormalities, defective targeting of Syntaxin-1 and cell autonomous neurodegeneration via the AKT/GSK3β pathway

   Fatima Farzana
   Leanne Schmitz
   Vincent Huson
   Joshua Obermayer

Group C: Neurodegenerative disorders I

9. Céline Heldring
   Novel mechanisms of reduced hippocampal plasticity in APP-PS1 mice

10. Niels Reinders
    AMPA-receptor subunit GluA3 is crucial for Aβ-mediated synaptic and memory deficits

11. Sylvie Lesuis
    Early life stress affects life expectancy and neuronal morphology in a preclinical model of Alzheimer’s disease

12. Eline Willemse
    Standard biobanking conditions are sufficient to prevent biofluid sample evaporation

   Mieke de Jager
   Sovann Kaing
   Carla da Silva Matos
   Mariana Raimundo Pinto de Matos

Group D: Developmental Disorders

13. Sara Ambrosino
    Developmental trajectories of cortical volume, surface, thickness and gyrification in Attention-Deficit/Hyperactivity Disorder
14. Tim Kroon
Functional and morphological synaptic changes in the OPHN1 model for mental retardation
15. Daniel Twohig
Dyrk1A: The implications of interactions with Munc18-1
15a. Jorim Tielbeek
Exploring the polygenic architecture of antisocial behavior.
Josta Kevenaar
Koen van Lith
Laura Dix
Roberta Mancini
Renske Gahrmann

Group E: Seizures

16. Sicco de Knecht
Using optogenetics to investigate the relation between parvalbumin-positive interneurons and dentate gyrus granule cells
17. Valentina Iori
miR146a-mediated control of brain inflammation: a new therapeutic opportunity in epilepsy
18. Jovana Kovacevic
Munc18-1 haploinsufficiency leads to epilepsy-like phenotype in mice
Marijn Schouten
Iris Overwater
Cato Drion
Claudio Derada Troletti

Group F: Psychiatric disorders

19. Wendy Nieuwdorp
Understanding the efficacy of electroconvulsive therapy in patients with unipolar and bipolar depression
20. Laura van Velzen
Brain-derived neurotrophic factor and regional brain volume
21. Jeffrey Stedehouder
Extracellular matrix abnormalities in schizophrenia
22. Josjan Zijlmans
Neurobiological correlates of multiproblematic behaviour in young adults
Laura Koenders
Roel Mocking
Philip Jansen

Group G: Brain imaging I

23. Anne Marije Kaag
Neural correlates of aversive conditioning in regular cocaine users

24. Ferdy Cayami
Mutations in POLR3A and POLR3B in patients with unclassified hypomyelination
25. Rozanna Meijboom
Increased default mode network connectivity in phenocopy frontotemporal dementia
26. Lisanne Stolwijk
Brain-injury after neonatal surgery for non-cardiac congenital anomalies
Group H: Brain imaging II

27. Sai Venkat Sandeep Golla
Partial volume correction of brain PET studies using iterative deconvolution in combination with HYPR denoising

28. Ulrike Filp

29. Renske Raaphorst
A new P-gp PET tracer: Synthesis and evaluation of fluorine-18 labelled verapamil analogues

Berend van der Wildt
Willemsieke Kouwenhoven
Bart Ferguson
Martina Rosato
Jacques Flores

Group I: Neuroimmunology

30. Marleen van Coevorden
Autoimmune encephalitis: a search for novel neuronal surface autoantigens

31. Daniel Amado Ruiz
The influence of social status on immune responsiveness

32. Bieneke Janssen
Synthesis of [11C]SMW64-D16, an allosteric P2X7 receptor antagonist for PET imaging of microglial activation in neuroinflammation

32a. Charissa van Kesteren
Prednisolone additions in recent-onset psychosis: proof of concept for uncovering the immune hypothesis

Avanita Prabowo
Richard Hardstone
BJ van Dijk
Gerrald Lodewijk
Group J: Neuroendocrinology & homeostasis

33. Zhi Zhang
Differential effects of chronic, intrahypothalamic thyroid hormone administration in the ventromedial and paraventricular nucleus

34. Anneloes Opperhuizen
Effects of daily timing of food intake on the hypothalamic orexin system

35. Kit-Yi Yam
The role of altered fat deposition and metabolism in the early-life stress induced metabolic and cognitive effects

36. Linde Boekhoudt
Pharmacogenetic stimulation of VTA, but not substantia nigra, dopamine neurons strongly affects feeding and locomotor patterns

Sofia Kanatsou
Daniela Herrera Moro Chao
Emma van Bodegraven
Elena Marchisella

Group K: Environmental factors and the brain

37. Lianne Hoeijmakers
The lasting effects of early-life stress on the onset and extend of AD pathology

38. Remmelt Schür
The Prospect study: Effects of Childhood Trauma on Stress Reactivity

39. Kim Dekker
An integrated approach to sleep improvement

40. Maremka Zwinkels
Research design of the Sport-2-Stay-Fit (S2SF) study: after school sport participation in children with a chronic disease or condition

Judy van Hemmen
Eva Naninck
Teuni ten Brink
Selene Gallo

Group L: Cognition and sleep

41. Rick Wassing
Dissipation of shame facilitated by sleep. A karaoke study

42. Michele Colombo
Prediction of insomnia on the basis of electrophysiological spectral content during wakefulness

43. Mona Irrmischer
Temporal dynamics of attentional processing

43a. Amber Kerkhofs
The role of prefrontal A2A receptors in synaptic plasticity

Yan Su
Yoshiyuki Onuki
Karina Cecilia Borja Jiménez
Eva Albers
Jeroen Verharen
Poster session II - Friday 28 November 2014, 10.00 - 11.00

Group M: Neuronal development II

44. Dwayne Holmes
Generating granule cells and oligodendrocytes from 4H patient derived iPSCs
45. Aishwarya Nadadhur
Functional GABAergic neuronal culture from induced pluripotent stem cells for disease modeling
46. Shashini Munshi
A novel human-specific BDNF transcript associated with schizophrenia
Stephanie Dooves
Maria Renner
Stephanie Hoekstra
Sonia Vazquez

Group N: Neuronal development III

47. Anna Bennis
Toward stem cell based therapy for diseases which affect the retinal pigment epithelium
48. Javier Emperador Melero
Dense core vesicle trafficking and release in ESC-derived neurons
49. Callan Attwell
Combinatorial expression of regeneration associated transcription factors in a high throughput F11 neurite outgrowth assay
Aria van Vliet
Behdokht Hosseini
Lisa Hinz
Marinka Brouwer

Group O: Plasticity and synapses

50. Hai Yin Hu
Spike-timing dependent potentiation by two-photon glutamate uncaging
51. Swati Arora
Membrane localized SNAREs driving neuronal DCV release
52. Janske Willems
Organization of neocortical and amygdalar inputs in the mouse parahippocampal cortex in vitro
53. Linda van Keimpema
The role of Vesicle Associated Membrane Protein (VAMP) isoforms in dense core vesicle release
M.S Hamada
Enqi He
Demirhan Cetereisi
Miguel Gonzalez Lozano
Group P: Neurodegenerative disorders II

54. Sara Hijazi
Dysfunctional interneuron networks impair cognition in an APP/PS1 mouse model of Alzheimer’s disease

55. Lisanne Wisse
Towards the understanding of the molecular mechanism of vanishing white matter

56. Casper de Boer
The antisaccade and antitapping task: an innovative behavioral paradigm to diagnose Parkinson’s disease

57. Lana Osborn
Astrogliosis: changes in potassium buffering in Alzheimer’s

Chris Vriend
Veerle Eggens
Jackelien van Scheppingen

Group Q: Neurodegenerative and demyelinating disorders

58. Eline Hamilton
Clinical characteristics of Vanishing White Matter

59. Ananya Chakraborty
Vascular remodeling in Alzheimer’s with microbleeds

60. Sietske Kevelam
Novel (ovario)leukodystrophy related to AARS2 mutations

61. Ilanai Michailidou
Evidence of complement-mediated stripping of synapses in the multiple sclerosis hippocampus.

Mohit Dubey
Nathaly Espitia Pinzon
Alessandro Moro
Huub Terra

Group R: Genome analysis

62. Bart Appelhof
tRNA processing mutation in Pontocerebellar Hypoplasia

63. Cesar Vroom
MGAS: extension to family based data

64. Anke Hammerschlag
Specific synaptic and glial functions contribute to the common risk of multiple psychiatric disorders

Anne-Lieke van Deijk
Girish Kedar
Fraukje Coopmans
Mats Nagel

Group S: Vision and visual processing I

65. Premnath Thamizharasu
Perceptual learning in adult visual cortex

66. Jessy Possel
Imagery influences neuronal responses in human early visual cortex (V1/V2): a case study.

67. Guido Meijer
The effect of correlated noise on population coding in the visual cortex
68. Alexandra Leighton
How are waves of spontaneous activity shaped in the visual cortex?
Sizar Kamar
Danique Jeurissen
Dmitri Yousef Yengej

Group T: Vision and visual processing II

69. Marlou Kooiker
The development of visual function and oculomotor responses in children with visual processing impairments

70. Mehran Ahmadlou
Precise organization of orientation selectivity in the mouse superior colliculus

71. Mariska van Lier
Altered critical period for ocular dominance plasticity in heterozygous NF1 mutant mice
Daniela Camillo
Jorrit Montijn
Azadeh Tafreshiha
Nico Flierman

Group U: Sensory and motor systems

72. Abdel Abdelgabar
Shared circuits in the cerebellum

73. Judith Suttrup
Mirror neurons in the cerebellum?

74. Martijn Sierksma
The role of synaptic summation in triggering action potentials in the calyx of Held-target neuron in vivo during postnatal development

75. Ulf Schnabel
Figure ground perception in mice: electrophysiology and behavior
Andrius Plauska
Peter Quinn
Keerthi Doreswamy
Sonja Simpraga

Group V: Cognition and behavior I

76. Roel de Haan
Neuronal activity in prefrontal cortex during cognitive behaviour

77. Esther Remmelink
A novel task to assess reversal learning in mice in a home-cage environment

78. Wisse van der Meijden
The effect of red and blue light exposure on pupil diameter and alertness

79. Myrthe Ottenhoff
Effect of Lamotrigine on cognitive deficits associated with Neurofibromatosis type 1: design for a phase II randomized, placebo-controlled, multi-center trial
Marit Arp
Gerben Klein
Lianne Klaver
Johny Pires
Group W: Cognition and behavior II

80. Paul Mertens
Audiovisual integration in the cortico-hippocampal system of the freely moving rat

81. Sreedeep Mukherjee
Neuromodulation of perceptual learning

82. Madison Carr
The role of glutamatergic inputs to the nucleus accumbens in delay-aversive decision-making.

83. Ivana Milojevic
The role of hippocampal CA3 neurons in planning, decision-making and goal-directed behavior

Hui Xiong
Devavrat Vartak
Mariette Lenselink
Bastiaan Bruinsma