

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.

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?

11.30 – 11.45 Break

- 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 A β deposition in cerebral amyloid angiopathy and forms complexes with A β 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 Postersession II

11.00 – 12.30 **Session 4A: Brain activity & disorders** ▪ Chair: Erwin van Vliet

27. Josta Kevenaer

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 Schranter

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 Lenseink

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 Ahmadi
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/GSK3 β 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 A β -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 Gahrman

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

Anouk Schrantee
Eline Zaaijer
Amalia Giannopoulou
Lena Vaclavu
Nefeli Kakava-Georgiadou

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

Native peptides radiolabeled with Carbon-11: use of [11C]alanine and peptides as an imaging tool for Positron Emission Tomography.

29. Renske Raaphorst

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

Berend van der Wildt

Willemieke 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. Bienneke 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 Nadadur

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

Astroglia: 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. Iliana 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 Ahmadi

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. Sreedeeep 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