

## PROGRAM ONWAR/BCRM ANNUAL MEETING 2015

### THURSDAY

The parallel sessions are in two rooms:

A = Big Lecture Hall [room 30] Daychair: Joshua Obermayer

B = Kapelzaal [room16] Daychair: Bart Appelhof

09.00 – 09.45 Registration/coffee&tea

09.45 – 09.55 Welcome by day chair @ Big Lecture Hall

10.00 – 11.15 **Session 1A: Psychiatric & Developmental Disorders** - Chair: Frank Baas

1. Anke Hammerschlag

Gene-set analysis provides novel insight into the shared genetic risk between psychiatric disorders

2. Shashini Munshi

Novel Human-Specific BDNF Transcripts associated with familial schizophrenia

3. Tim Kroon

The emergence of intellectual disability-associated phenotypes caused by Oligophrenin-1 deficiency during early postnatal development

4. Mariska van Lier

Altered Critical Periods in development could lead to cognitive impairments in NF1

**Session 1B: White Matter(s)!** - Chair: Valeria Ramaglia

1. Sietske Kevelam

MRI pattern recognition and exome sequencing: a powerful combined approach for disease gene identification

2. Lisanne Wisse

Towards the understanding of the molecular mechanism of vanishing white matter

3. Jeffrey Stedehouder

Laminin abnormalities in schizophrenia

4. Bieneke Janssen

Synthesis of the first carbon-11 labelled P2Y<sub>12</sub> receptor antagonist for PET imaging of microglial activation in neuroinflammation

11.15 – 11.30 Coffee break

11.30 – 12.30 **Session 2A: Neuronal (Re)connectivity and Activity** - Chair: Corette Wierenga

1. Sicco de Knecht

Dissecting excitation and inhibition in hippocampal microcircuits CA1 and DG, using linear decomposition of synaptic responses

2. Pascal Bielefeld

Dysregulation of adult hippocampal neurogenesis by seizure activity in a model of intrahippocampal Kainic acid-induced neuronal hyperactivity: a possible role for functional cooperativity between microRNA-124 and -137

3. Callan Attwell

Combinatorial expression of transcription factors to promote axon regeneration after spinal cord injury

**Session 2B: Catching Cognition** - Chair: Chris Klink

1. Anne Marije Kaag  
Cocaine abuse is associated with hyperresponsivity of the amygdala
2. Judith Suttrup  
New insight into the action observation network
3. Esther Remmelink  
Rapid and refined screening of behavioral flexibility, impulsivity and attention in mice using different types of automated home-cage tasks

12.30 – 13.30 Lunch

13.30 – 14.30 **Blitz I** @ Big Lecture Hall

14.30 – 15.45 **Poster session I**

15.45 – 16.00 Refreshments @ entrance Big Lecture Hall

16.00 – 17.45 **The Conscientious [Neuro]Scientist** @ Big Lecture Hall

Talk: André Maia Chagas, OpenNeuroscience

Workshops: Open Science initiatives from around the Netherlands

18.00 Dinner

20.00 Evening program

**FRIDAY**

The parallel sessions are in two rooms:

A = Big Lecture Hall [room 30] Daychair: Mustafa Hamada

B = Kapelzaal [room16] Daychair: Madison Carr

08.00 – 09.15 Breakfast

09.15 – 10.15 **Blitz II** @ Big Lecture Hall

10.15 – 11.30 **Poster session II**

11.30 – 12.30 **Session 3A: The Plastic Brain: Receptors and Proteins** - Chair: Guus Smit

1. Niels Reinders  
AMPA-receptor subunit GluA3 is crucial for Abeta-mediated synaptic and memory deficits
2. Tatiana Cerveira  
Cellular pathways associated with atypical apoptosis in neurons deficient for the presynaptic protein Munc18-1
3. Sandeep Golla  
Quantification of the novel NMDA receptor ligand [11C]GMOM in man

**Session 3B: Sensory and Hormone Systems** - Chair: André Maia Chagas

1. Anneloes Opperhuizen  
Does staying awake at night make us sick?
2. Hemanth Mohan  
Representation of whisker somatosensation and encoding of active object touch in the posterior parietal cortex of rodents.
3. Zhi Zhang  
Administration of thyrotropin-releasing hormone (TRH) in the rat paraventricular nucleus (PVN) induces cold-defense responses

12.30 – 13.30 Lunch

13.30 – 14.45 **Session 4A: Alzheimer's Disease** - Chair: Wiep Scheper

1. Rozanna Meijboom  
Regional coherence between changes in white matter microstructure and grey matter volume and perfusion abnormalities in presenile dementia
2. Céline Heldring  
Hippocampal extracellular matrix as a potential treatment target for cognitive decline in Alzheimer's disease
3. Lana Osborn  
Functional dysregulation of the inward rectifier KIR4.1 in astrocytes in Alzheimer's
4. Renske Raaphorst  
A new P-gp PET tracer: Synthesis and evaluation of new fluorine-18 labeled verapamil analogs

**Session 4B: Focus on the Eye** - Chair: Maarten Kamermans

1. Mehran Ahmadi  
Orientation columns in the mouse superior colliculus
2. Anna Bennis  
Towards a cell based therapy for neurodegenerative disorders of the retina

14.45 – 15.00 Tea break

15.00 – 16.00 **Swammerdam lecture** @ Big Lecture Hall  
Eunjoon Kim, Center for Synaptic Brain Dysfunctions, KAIST, Daejeon, South-Korea  
Synaptic scaffolds, NMDAR function, and autism spectrum disorders

16.00 – 16.30 Awards & closing remarks

**Blitz session I – Thursday November 26, 2015, 13:30 – 14:30**

1. Diane van Rappard
2. Sreedeeep Mukherjee
3. Alexandra Leighton
4. Ana Rita Agra de Almeida Quadros
5. Yingying Han
6. Hanneke Bruijnzeel
7. Aishwarya Geeyarpuram Nadadhur
8. Lianne Hoeijmakers
9. Jessy Possel
10. Valentina Iori
11. Keerthi Doreswamy
12. Cátia Silva
13. Sonja Simpraga
14. Ulf Schnabel
15. Janske Willems
16. Ananya Chakraborty
17. Iris Wever
18. Claudio Derada Troletti
19. Sebastian Loyola
20. Miguel Gonzalez Lozano
21. Josjan Zijlmans
22. Anne-Lieke van Deijk
23. Eline Willemse
24. Demirhan Cetereisi
25. Maija-Kreetta Koskinen
26. Erik van Heesbeen
27. Guido Meijer
28. Mariana Raimundo Pinto de Matos
29. Roel de Haan
30. Martina Rosato

**Blitz session II – Friday November 27, 2015, 09:15 – 10:15**

1. Arija Jansen
2. Premnath Thamizharasu
3. Abdel Abdelgabar
4. Madison Carr
5. Sonia Vázquez Sánchez
6. Laura van Velzen
7. Malik Bechakra
8. Elena Marchisella
9. Johny Pires
10. Sanne Verkooijen
11. Swati Arora
12. Ferdy Cayami
13. Daniel Amado Ruiz

14. Linda van Keimpema
15. Renske Gahrman
16. Javier Emperador Melero
17. Sylvie Lesuis
18. Laura Dix
19. Jovana Kovacevic
20. Ulrike Filp
21. Claudia Persoon
22. Rick Wassing
23. Quentin Bourgeois
24. Prisca Leferink
25. Bart Appelhof
26. Roberta Mancini
27. Iliana Michailidou
28. Kit-Yi Yam

**Poster session I - Thursday November 26, 2015, 14:40 – 15:45**

**Group 1 (A)**

**(A1) Diane van Rappard**

The effectiveness of hematopoietic cell transplantation (HCT) in Metachromatic Leukodystrophy (MLD): promising results

**(A2) Sreedeeep Mukherjee**

Neuromodulation of perceptual learning

**(A3) Alexandra Leighton**

How are waves of spontaneous activity patterned during development?

**(A4) Vincent Huson**

CHEOPS: Chip for High-throughput Electrophysiology using Open nano- Pyramids and Stealth electrodes

Marieke Albers

Céline Heldring

Sandeep Golla

**Group 2 (V)**

**(V1) Ana Rita Agra de Almeida Quadros**

Fbxo41 promotes disassembly of neuronal primary cilia

**(V2) Han Yingying**

Effect of oxytocin on socially triggered freezing in rats

**(V3) Dmitri Yousef Yengej**

Enhanced external activity modulates H-current in CA1 Interneurons

**(V4) Hanneke Bruijnzeel**

Complications in the alternative SupraMeatal Approach (SMA) for paediatric cochlear implantation

Sophie van der Spek

Paul Ormel

Anne Marije Kaag

**Group 3 (C)**

**(C1) Aishwarya Geeyarpuram Nadadhur**

Functional neurons from induced pluripotent stem cells in co-culture model with glia to study neurodevelopmental disorders

**(C2) Lianne Hoeijmakers**

Early-life stress related modulation of microglia and Alzheimer's Disease neuropathology in APP<sup>swe</sup>/PS1<sup>dE9</sup> mice

**(C3) Jessy Possel**

Dual task interference in macaque early visual cortex

**(C4) Gijsje Snijders**

Is TPO-abs an endophenotype for bipolar disorder? Results from two follow up studies in bipolar families and bipolar twins

**Renee Schluter**

**Lana Osborn**

**Arthur Avramiea**

**Group 4 (E)**

**(E1) Valentina Iori**

miR-146a-mediated control of brain inflammation: a new therapeutic opportunity in epilepsy

**(E2) Keerthi Doreswamy**

Cluster analysis of individual pyramidal neurons in layers 2 and 3 of the temporal cortex in humans and laboratory animals

**(E3) Cátia Silva**

Mitochondrial dynamics in synapse development

**(E4) Jacques Flores**

The role of ventral tegmental dopamine projections in impulsivity and attention

**Wouter van Elzelingen**

**Maralinde Abbink**

**Judith Suttrup**

**Group 5 (X)**

**(X1) Sonja Simpraga**

Is EEG-based biomarker prediction the key to personalized medicine?

**(X2) Ulf Schnabel**

Figure ground processing in awake mice

**(X3) Alessandro Moro**

Calcium/Calmodulin-dependent protein kinase II control of neuropeptide release in hippocampal neurons

**Sybren de Kloet**

**Lyliana Nasib**

**Esther Rimmelink**

**Anna Bennis**

## **Group 6 (I)**

### **(I1) Janske Willems**

Characterization of inhibitory and excitatory synaptic input recruited by the neocortex or amygdala in perirhinal and entorhinal deep layer neurons ex vivo

### **(I2) Ananya Chakraborty**

Vascular remodelling in Alzheimer's with microbleeds

### **(I3) Lianne Klaver**

The domestic ferret (*Mustela putorius furo*) as a model for studying multisensory integration

### **(I4) Bastiaan Bruinsma**

The role of medial prefrontal cortex projections in attention

**Andrea Ganz**

**Seçil Uyaniker**

**Zhi Zhang**

## **Group 7 (G)**

### **(G1) Iris Wever**

Epigenetic mechanisms in mesodiencephalic dopaminergic neuron development

### **(G2) Claudio Derada Troletti**

Molecular regulation of the blood-brain barrier phenotype

### **(G3) Mats Nagel**

Multivariate rare variant association testing

### **(G4) Azadeh Tafreshiha**

Behavioural response of mice to flying objects

**Christina de Veij Mestdagh**

**Enny van Beest**

**Niels Reinders**

## **Group 8 (K)**

### **(K1) Sebastian Loyola**

Dynamic control of synaptic integration in the inferior olive

### **(K2) Miguel Gonzalez Lozano**

The DISC1-Schizophrenia interactome

### **(K3) Philip Jansen**

The association between polygenic scores for educational attainment and white matter integrity during childhood: a population based study



**(K4) Premika Boedhoe**

Neuroimaging of subcortical brain volume alterations in paediatric and adult obsessive-compulsive disorder: preliminary findings from the enigma obsessive-compulsive disorder working group

**Richard Dinga**  
**Sicco de Knecht**  
**Linda Koene**

**Group 9 (M)**

**(M1) Josjan Zijlmans**

Error processing and psychopathy in multiproblem young adults: preliminary EEG results

**(M2) Anne-Lieke van Deijk**

The role of glial lipid metabolism in neuronal plasticity

**(M3) Nienke Wagenaar**

Diffusion tensor imaging at term equivalent age is associated with neurodevelopmental outcome at two years of age

**(M4) Eva Albers**

Fear elicits changes in synaptic activity by activating AMPA-receptor subunit GluA3

**Isabell Ehmer**  
**Pascal Bielefeld**  
**Yarmo Mackenbach**

**Group 10 (O)**

**(O1) Eline Willemse**

CSF amyloid-beta(1-42) absorbance to plastics in laboratory practice

**(O2) Demirhan Cetereisi**

G-protein coupled receptor GPR158 knockout mice show deficits in spatial memory and reward-based reversal learning

**(O3) Erik van Tilborg**

Validating a new clinically relevant rodent model for perinatal diffuse white matter injury

**(O4) Joshua Obermayer**

Lateral inhibition is enhanced by endogenous acetylcholine release

**Nina Fransen**  
**Rebecca Sier**  
**Johanna Hakonen**

## **Group 11 (Q)**

### **(Q1) Maija-Kreetta Koskinen**

Alterations in the affective and cognitive domain after social defeat in mice

### **(Q2) Erik van Heesbeen**

Epigenetic mechanisms in midbrain development and maintenance

### **(Q3) Nienke de Wit**

Possible different roles for LXR-alfa and LXR-beta in regulating blood-brain barrier integrity

### **(Q4) Yujie He**

The role of P2X7 in cannabis-induced psychosis

**Jessica Classen**

**Anne van Ham**

**Anatoly Korotkov**

## **Group 12 (S)**

### **(S1) Guido Meijer**

Chronic GCaMP6 imaging shows temporal stability of noise correlations: relevance for population coding

### **(S2) Mariana Raimundo Pinto de Matos**

Optogenetic manipulation of neuronal ensembles controlling cocaine-associated memory expression

### **(S3) Huub Terra**

Temporal activity pattern of medial prefrontal cortex to dorsal striatum projecting neurons during visuospatial attention

### **(S4) Nathalie Claessens**

Cortical folding in extremely preterm infants in relation to neurodevelopmental outcome

**Dennis Kruijssen**

**Sietske Kevelam**

**Eddy Robsinon**

## **Group 13 (U)**

### **(U1) Roel de Haan**

Somatosensation in the awake rat prefrontal cortex

### **(U2) Martina Rosato**

Functional analysis of schizophrenia (SCZ) risk genes using high-content screening

### **(U3) Gerrald Lodewijk**

Segmental duplications as a source for novel neurodevelopmental genes in the human genome

**(U4) Johan Telleman**

HOPE study: prognostic value of sonography in polyneuropathies

**Paul de Goede**

**Tatiana Cerveira**

**Rob Teeuwen**

**Poster session II - Friday 27.11.2015, 10:15 – 11:30**

**Group 14 (Z)**

**(Z1) Arija Jansen**

Gene set of oligodendrocyte cytoskeletal function and fragile X mental retardation protein (FMRP) targets associated with Autism Spectrum Disorders

**(Z2) Premnath Thamizharasu**

Perceptual learning in adult visual plasticity

**(Z3) Abdel Abdelgabar**

Responsibility modulates pain-matrix activation elicited by the expressions of others in pain

**(Z4) Marinka Brouwer**

Characterization of SALM1-5 protein expression patterns during neuronal development

**Nina Haring**

**Eelke Brouwers**

**Anneloes Opperhuizen**

**Group 15 (B)**

**(B1) Madison Carr**

Impulsive decision-making with the lights ON: Glutamatergic activity in the prelimbic cortex and impulsive choice

**(B2) Sonia Vazquez Sanchez**

The role of sorting nexins in synaptic function

**(B3) Lisa Hinz**

Gene expression and morphological differences in Rett syndrome

**(B4) Sara Hijazi**

Aberrant PV+ neurons activity affect hippocampal network plasticity and cognitive abilities in Alzheimer's disease

**Cynthia Pfeifer**

**Shashini Munshi**

**Adrienne Pike**

## **Group 16 (D)**

### **(D1) Laura van Velzen**

Effect of childhood maltreatment and brain-derived neurotrophic factor on brain morphology

### **(D2) Malik Bechakra**

Bortezomib-induced peripheral neuropathy: clinical data and nerve fiber density measurements in skin biopsies

### **(D3) Elena Marchisella**

Behavioral changes in schizophrenia mouse models of 1q21,15q13.3 and 22q11.2 microdeletions

### **(D4) Tessa van Dijk**

Mosaic uniparental isodisomy of chromosome 15q in an atypical PCH patient

**Rhodé van Westen**

**Anke Hammerschlag**

**Maryse Minnaard**

## **Group 17 (F)**

### **(F1) Johnny Pires**

Synchronous network activity in the network development of immature mPFC in mice

### **(F2) Sanne Verkooijen**

Sleep disturbances are a state marker and not an endophenotype of bipolar disorder

### **(F3) Merijn Joling**

Extrastriatal [<sup>123</sup>I]FP-CIT binding in the differential diagnosis of parkinsonism: A pilot study

### **(F4) Marjolein Sneeboer**

Functional phenotyping of human isolated microglia in comparison with myeloid cells and cell models

**Marieke van Ziel**

**Hemanth Mohan**

## **Group 18 (H)**

### **(H1) Swati Arora**

SNAP and Munc18 isoforms driving DCV release

### **(H2) Ferdy Cayami**

Investigating the other face of 4H syndrome

### **(H3) Daniel Amado Ruiz**

The influence of social status on immune responsiveness

**(H4) Bart Ferguson**

Studying cortical layering in schizophrenia using 3T MRI

**(H5) Bart van Dijk**

Glial cell activation after subarachnoid hemorrhages – functional consequences and clinical implications

**Tamar Smit**

**Lisanne Wisse**

**Group 19 (J)**

**(J1) Linda van Keimpema**

Identification of essential domains in the calcium-activator protein for secretion (CAPS) for the release of neuropeptides

**(J2) Renske Gahrman**

Clinical implementation of hybrid echo-planar perfusion imaging (hEPI) for the assessment of glioma

**(J3) Mascha Linszen**

Auditory hallucinations in adult patients with hearing loss

**(J4) Cesar Vroom**

Connecting brain and personality: a network approach

**Céline Koster**

**Mariska van Lier**

**Mehran Ahmadi**

**Group 20 (W)**

**(W1) Javier Emperador Melero**

Neuropeptides trafficking and release in iPSC-derived neurons

**(W2) Sylvie Lesuis**

Early life experiences modulate survival and behavioural performance in an animal model for Alzheimer's Disease

**(W3) Laura Dix**

Cerebral oxygenation and echocardiographic parameters in preterm neonates with a Patent Ductus Arteriosus

**(W4) Jalmar Teeuw**

Genetic factors of cortical development and intelligence in a longitudinal Dutch twin study

**(W5) Carla da Silva Matos**

A-beta selectively targets conductive GluA3 containing synapses

**Janna Smeets**

**Aile van Huijstee**

## **Group 21 (L)**

### **(L1) Jovana Kovacevic**

Deletion of autism related gene, DPP10, alters animal behaviour and cell excitability

### **(L2) Ulrike Filp**

Novel synthesis routes to obtain [11C]glutamate and [11C]glutamine using Michael additions

### **(L3) Tim van Balkom**

Profiling cognition and neuropsychiatry in Parkinson's disease – a cluster analysis

### **(L4) Rune Bruls**

Pro-social behaviour in an empathy for pain paradigm

**Vera Wiersma**

**Jeffrey Stedehouder**

**Callan Attwell**

## **Group 22 (N)**

### **(N1) Claudia Persoon**

RIM proteins are required for neuropeptide secretion in the brain

### **(N2) Rick Wassing**

The role of REM sleep in the regulation of emotion preliminary data

### **(N3) Annet van Bergen**

The clinical and genetical distinction between bipolar disorder with and without psychotic symptoms, exploring the psychosis subtype

### **(N4) Jiska Kentrop**

The effects of early life stress on social competence possibilities for intervention

**Alwin Kamermans**

**Rozanna Meijboom**

## **Group 23 (P)**

### **(P1) Quentin Bourgeois**

Functional analysis of the Ca<sup>2+</sup>-sensing mechanism of Doc2b protein implied in spontaneous neurotransmitter release

### **(P2) Prisca Leferink**

Using stem cell-derived glial cells for disease modeling and transplantation therapy for Vanishing White Matter disease

**(P3) Cato Drion**

Effects of Rapamycin in a rat model for Temporal Lobe Epilepsy – is mTOR inhibition anti-epileptogenic?

**(P4) Selene Gallo**

Sharing pain in the somatosensory cortex. A mu suppression study

**Suzanne Miedema**

**Bieneke Janssen**

**Group 24 (R)**

**(R1) Bart Appelhof**

tRNA processing defects in Pontocerebellar hypoplasia

**(R2) Roberta Mancini**

Exploring the role of presynaptic  $Ca^{2+}$  transients in quantal neurotransmission

**(R3) Karina Cecilia Borja Jimenez**

The cognitive control of empathy

**(R4) Nienke Derks**

Effect of early life stress on synaptic plasticity in the developing rat hippocampus

**Tim Kroon**

**Aina Badia Soteras**

**Group 25 (T)**

**(T1) Iliana Michailidou**

The relation between complement C3 and microglial nodules in multiple sclerosis

**(T2) Kit-Yi Yam**

Nutritional intervention with essential fatty acids prevents the early-life stress induced cognitive impairments

**(T3) Stephanie Hoekstra**

Astrocytes in schizophrenia

**(T4) Veronne de Vrind**

Behavioral effects of leptin receptor expressing neurons in the ventral tegmental area

**Sverrir Sigurdsson**

**Renske Raaphorst**