



LMU – HARVARD Young Scientists' Forum

@ HARVARD, July 19 – 22, 2014

Saturday, July 19

Northwest Building, B1 Lobby, 52 Oxford Street, Cambridge, MA 02138

8:45 AM Continental breakfast at Northwest Building, B1 lobby

9:00 **Opening Remarks** by **Kenny Blum**, Executive Director, Center for Brain Science

9:15 **Faculty Seminar: Charles Weitz**, HARVARD
A Molecular Basis for Specificity in the Mammalian Circadian Clock Feedback Loop

10:15 Break

10:30 **Young Scientist Session One: Chronobiology to Synapses**

- Mirjam Geibel**, Merrow Lab, LMU
Interaction of the Circadian Clock and Neurodegenerative Processes in *C. elegans*
- Anne Venner**, Saper Lab, HARVARD
Investigating the Role of CNS Histamine in Mediating Sleep-wake States using DREADDs
- Celine Vetter**, Schernhammer Lab, HARVARD
Clocks @ Work - Concepts, Data, and Mechanisms
- Genevieve van de Bittner**, Hooker Lab, HARVARD
Monitoring Synaptic Density: PET Tracer Development and Neuroimaging

12:30 PM Lunch

2:00 **Young Scientist Session Two: Neural Development and Pathology**

- Francesca Vigano**, Dimou Lab, LMU
Heterogeneity of Adult NG2⁺-cells: Differentiation Properties and Reaction to Injury
- Sergio Gascon**, Götz Lab, LMU
Identification and Successful negotiation of a Metabolic Checkpoint in Direct Neuronal Reprogramming
- Lotta von Rüden**, Potschka Lab LMU
Pharmacological and Genetic Modulation of the Endocannabinoid System in a Chronic Epilepsy Model
- Johanna Wanngren**, Lichtenthaler Lab, TUM
Regulated Intramembrane Proteolysis and its Therapeutic Potential in Alzheimer Disease

4:00 Break

4:15 **Faculty Seminar: Stefan Lichtenthaler**, TUM
Neuroproteomics and Neurodegeneration: Substrates and Functions of Alzheimer Secretases

5:30 **Poster Session One and Social Hour**

- Stephen Abbott**, Saper Lab, HARVARD: TBA
- Rainer Bögle**, Dietrich Lab, LMU: Age-related Decline in Functional Connectivity of the Vestibular Cortical Network
- Greg Bryman**, Do Lab, HARVARD: TBA
- Xin Duan**, Sanes Lab, HARVARD: Type II Cadherins Guide Assembly of a Direction – Selective Retinal Circuit
- Arne Fabritius**, Griesbeck Lab, MPI Neurobiology: The Evolution Machine: Improvement of Optogenetics Proteins
- Delwen Franzen**, Felmy Lab, LMU: Pre- and Postsynaptic Refinements in the MSO during Late Postnatal Development
- Sami Hassan**, Biel Lab, LMU: Two-pore Channel 2 – a Regulator of Endo-lysosomal Trafficking
- Max Koch**, Sieber Lab, TUM: Subclass-specific Capture of Maleimide-antibiotics with Customized Nucleophilic Probes
- Johannes Kohl**, Dulac Lab, HARVARD: Ultra-fast Tissue Staining with Chemical Tags
- Manuel Lehm**, Dichgans Lab, LMU: Proteome-wide Analysis for Identification of Functional SNPs
- Maria Olmedo**, Merrow Lab, LMU: High Throughput Methods for Characterisation of Lethargus in *C. elegans*
- Laura Trovo**, Misgeld Lab, TUM: Zebrafish to Study Cholesterol Involvement in Axon Degeneration
- Ziyang Zhang**, Myers Lab, HARVARD: A Practical Platform for the Synthesis of Macrolide Antibiotics

7:30 Dinner catered by Blue Ribbon BBQ outside Northwest Café

Sunday, July 20



Northwest Building, B1 Lobby, 52 Oxford Street, Cambridge, MA 02138

8:45 AM Continental breakfast at Northwest Building, B1 lobby

9:00 **Faculty Seminar: Sandeep Robert Datta, HARVARD**
Modularity and Predictability in Naturalistic Behavior

10:00 Break

10:30 **Young Scientist Session Three: Neural Plasticity / Cancer Therapeutics**

Judith Reichel, Wotjak Lab, MPI Psychiatry
Effects of Cell type-specific Manipulations on Cognitive and Emotional Behaviour in Mice

Sheng Hong Chen, Lahav Lab, HARVARD
TBA

Gabriela Wiedemann, Endres Lab, LMU
A Novel Synthetic Toll-like-Receptor 7 Agonist for Tumor Therapy

Christina Krupka, Subklewe Lab, LMU
CD33-targeted Immunotherapy in AML

12:30 PM Lunch

2:00 **Faculty Seminar: Marion Subklewe, LMU**
Dendritic Cell Vaccination in Cancer Immunotherapy:
From Biology to Translational Medicine

3:15 **Poster Session Two and Social Hour**

Stephen Abbott, Saper Lab, HARVARD: TBA

Rainer Bögle, Dietrich Lab, LMU: Age-related Decline in Functional Connectivity of the Vestibular Cortical Network

Greg Bryman, Do Lab, HARVARD: TBA

Xin Duan, Sanes Lab, HARVARD: Type II Cadherins Guide Assembly of a Direction – Selective Retinal Circuit

Arne Fabritius, Griesbeck Lab, MPI Neurobiology: The Evolution Machine: Improvement of Optogenetics Proteins

Delwen Franzen, Felmy Lab, LMU: Pre- and Postsynaptic Refinements in the MSO during Late Postnatal Development

Sami Hassan, Biel Lab, LMU: Two-pore Channel 2 – a Regulator of Endo-lysosomal Trafficking

Max Koch, Sieber Lab, TUM: Subclass-specific Capture of Maleimide-antibiotics with Customized Nucleophilic Probes

Johannes Kohl, Dulac Lab, HARVARD: Ultra-fast Tissue Staining with Chemical Tags

Manuel Lehm, Dichgans Lab, LMU: Proteome-wide Analysis for Identification of Functional SNPs

Maria Olmedo, Merrow Lab, LMU: High Throughput Methods for Characterisation of Lethargus in *C. elegans*

Laura Trovo, Misgeld Lab, TUM: Zebrafish to Study Cholesterol Involvement in Axon Degeneration

Ziyang Zhang, Myers Lab, HARVARD: A Practical Platform for the Synthesis of Macrolide Antibiotics

5:30 Dinner in Cambridge (*break into small groups hosted by HARVARD scientists*)

Monday, July 21

Cannon Room, Building C, 240 Longwood Avenue Boston, MA 02115

8:45 AM Shuttle bus departs Northwest Building for Longwood

9:30 Continental breakfast in Cannon Room lobby

9:45 **Faculty Seminar: Jacob Hooker, HARVARD**
Imaging and Quantification of Chemistry in the Brain,
From Synthesis Methods to Studies in Man

10:45 **Young Scientist Session Four: Small Molecules**

Malgorzata Borowiak, Trauner Lab, LMU
Reversibly Light-controlled Antimitotics:
Towards Intelligently Targeted Chemotherapy

Emily Ricq, Hooker Lab, HARVARD
A Thiol-Based Redox Switch Regulates the Histone Demethylase LSD1/KDM1a

Marina Santiago, Walker Lab, HARVARD
TBA

12:15 PM Lunch

2:00 **Faculty Seminar: Wolfgang Enard, LMU**
Mouse Models for Human Brain Evolution

3:00 **Young Scientist Session Five: Evolution to Cognition**

Nicolas Rohner, Tabin Lab, HARVARD
Pale, Small Eyes, Big Belly - the Genetic Basis of Unattractiveness - or
Why Cavefish Prefer the Dark

Elinor Karlsson, Sabeti Lab, HARVARD
Natural Selection and Cholera Resistance in Bangladesh

Pieter Goltstein, Hübener Lab, MPI Neurobiology
How Learning of Visual Associations Affects Sensory Processing in
Neocortical Networks

4:30 Break

5:00 **Faculty Seminar: Benedikt Grothe, LMU**
Evolution of Spatial Hearing

6:15 Dinner in Boston (*break into small groups hosted by HARVARD scientists*)

Tuesday, July 22

8:30 AM Breakfast on second floor landing of Northwest Building

9:00 *Shuttle bus departs Northwest Building*

10:15 Wingersheek Beach <http://gloucester-ma.gov/index.aspx?nid=299>

12:45 PM *Depart beach for boat dock*

1:00 Pick-up sandwiches

1:30 7Seas Whale Watch, Gloucester, MA <http://gloucester.7seaswhalewatch.com/>

6:30 *Depart Gloucester*

7:00 Closing Dinner at Woodman's, Essex, MA <http://www.woodmans.com/>



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Saturday, July 19 Northwest Building, B103, 52 Oxford Street, Cambridge, MA 02138

9:15 AM



Charles Weitz

Robert Henry Pfeiffer Professor of Neurobiology, Harvard Medical School

A Molecular Basis for Specificity in the Mammalian Circadian Clock Feedback Loop

4:15 PM



Stefan Lichtenthaler

Professor of Neuroproteomics (Chair), Technische Universität München

Neuroproteomics and Neurodegeneration: Substrates and Functions of Alzheimer Secretases

Sunday, July 20 Northwest Building, B103, 52 Oxford Street, Cambridge, MA 02138

9:00 AM



Sandeep Robert Datta

Assistant Professor of Neurobiology, Harvard Medical School

Modularity and Predictability in Naturalistic Behavior

2:00 PM



Marion Subklewe

Department of Internal Medicine, LMU

Dendritic Cell Vaccination in Cancer Immunotherapy: From Biology to Translational Medicine

Monday, July 21 HMS Longwood Quad, Cannon Room, Building C, 240 Longwood Avenue Boston, MA 02115

9:45 AM



Jacob Hooker

Assistant Professor of Radiology, Harvard Medical School

Imaging and Quantification of Chemistry in the Brain; From Synthesis Methods to Studies in Man

2:00 PM



Wolfgang Enard

Professor of Anthropology and Human Genetics (Chair), LMU

Mouse Models for Human Brain Evolution

5:00 PM



Benedikt Grothe

Professor of Neurobiology (Chair), LMU

Evolution of Spatial Hearing