

XXX Annual Meeting
Danish Society for Neuroscience (DSfN)

“The principles of learning in nature, machines
and disease”

May 17 – 18; 2016

Hotel Hesselet, Nyborg



Symposium organizers

Niels Plath, H. Lundbeck A/S
Duda Kvitsiani, University of Aarhus

Location

Hotel Hesselet, Christianslundsvej 119, 5800 Nyborg, Denmark
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Registration and payment

Early registration (before March 15)
Members of DSfN: DKK 3200
Non-members: DKK 4000
Students: DKK 1200

Danish Society for Neuroscience (DSfN)
Annual meeting, May 17-18, 2016
Hotel Hesselet, Nyborg, DK

"The principles of learning in nature, machines and disease"

Tuesday May 17th

09.00 – Arrival, coffee and registration

10.00 - Welcome

10.10 - **Introductory lecture:** Speaker pending.

Biological learning and machine learning: Commonalities, inspiration and differences.

Session 1: Computational models of learning, machine learning – in theory and applied

Chair: Niels Plath, H. Lundbeck A/S

11.00 – Paolo Marcatili, Technical University of Denmark, DK.

Machine learning in computational biology: common problems and solutions

11.35 – Ole Winther, Technical University of Denmark, DK.

Data science, AI and deep learning

12.10 - Lunch

13.00 – Michael Brammer, King's College London, UK.

Prediction and classification of mental illness using machine learning

13.35 - Short break

Session 2: Natural models of Learning: Molecular pathways

Chair: Poul Henning Jensen, University of Aarhus, DK

13.45 – Sadegh Nabavi, Dandrite, Aarhus University, DK.

Synaptic tagging and capture: from synapses to behavior

14.20 – Simon Glerup, Dept. Biomedicine, Aarhus University, DK.

Sortilins and sorting out what to remember

14.55 – Clive Bramham, University of Bergen, Norway

The Arc of synaptic memory

15.30 - Coffee and cake, posters

16.00 – Marie Carlen, Karolinska Institute, Sweden

Prefrontal parvalbumin neurons in control of attention

16.40 – **DataBlitz** 5x10 min (selected abstracts)

Organizer: Trevor Owens, University of Southern Denmark, DK

17.30 - Break

18.30 – Drinks and Dinner

Wednesday May 18th

07.30 - Breakfast

Session 3: Natural models of Learning: Neural circuits

Chair: Albert Gjedde, Univ. of Copenhagen, DK

08.30 – Armin Lak, University Cambridge, UK.

Dopamine learning signals: from perception to economic decisions

09.05 – Jesper Mogensen, University of Copenhagen, DK

Learning in the intact and injured brain: Neurocognitive organization and reorganization

09.40 – Ron Kupers, University of Copenhagen, DK

Learning in the Visually-Deprived Brain: Insights From Darkness

10.15 - Coffee

10:30 – Albert Gjedde, University of Copenhagen, DK

Learning by doing: Neuroimaging of sensation seeking

Session 4: Learning deficits linked to disease

Chair: Niels Plath, H. Lundbeck A/S, DK

11.10 – Barbara Sahakian, University Cambridge, UK.

Title pending

12.00 – Lunch

13.00 – Andreas Heinz, Charite Berlin, DE

Learning mechanisms in affective, addictive and psychotic disorders

13.45 – Steen Hasselbalch, University of Copenhagen, DK

Memory problems in Mild Cognitive Impairment and Alzheimer's dementia

14.30 - Short break

14.45 – **Closing lecture:** Surjo Soekadar, Univeristy of Tübingen, DE

Outlook and integration

Brain machine interfaces (BMI) as an example of fusing machine learning with biological learning.

15.45 – Concluding remarks and Departure

