EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

COST Action CA 15214 EuroCellNet
Training School

Reactive gliosis - from mechanobiology and signal transduction to molecular targets and disease pathogenesis

at Aspenäs Herrgård, Gothenburg, Sweden, 2-6 May 2017

Organizing committee:
Milos Pekny, Sweden
Ulrika Wilhelmsson, Sweden
Elly Hol, the Netherlands

Program

Tuesday, May 2, 2017
17.00 – 17.15 Opening and introduction
17.15 - 17.55 **Alex Verkhratsky, University of Manchester, UK:**
Molecular understanding of the function of astrocytes and their network in healthy and aging brain
17.55 - 18.15 Discussion
18.30 – 19.45 Dinner
20.00 – 21.45 **Poster session**

Wednesday, May 3
9.00-9.40 **Milos Pekny, University of Gothenburg, Sweden:**
The nanofilament system - a crisis command center of reactive astrocytes - implications for acute injuries and regeneration
9.40-10.00 Discussion
10.00-10.20 Break
10.20-11.00 **Elly Hol, University of Utrecht, The Netherlands:**
GFAP - the key nanofilament protein of astrocytes - lessons for aging and CNS diseases
11.00-11.20 Discussion
11.20-11.40 Break
11.40-12.20 **Christoph Cremer, Kirchhoff Institut für Physik, Heidelberg, Germany:**
Super-resolution microscopy - novel applications for the CNS research
12.20-12.40 Discussion
12.40-13.50 Lunch
13.50-15.20 Free time (ad hoc discussions, time with the teachers,…)
15.20-16.20 **Discussion Panel I:** Astrocyte signaling in acute and chronic stress
(Alex Verkhratsky, Christoph Harms, Albee Messing)

16.20-16.40 Break
16.40-17.40 Oral presentation of posters (2 min & 1 slide per presentation)
18.00-19.15 Dinner
19.30 – 21.30 **Poster session**

Thursday, May 4
9.00-9.40 **Marcela Pekna, University of Gothenburg, Sweden:**
The role of astrocytes and the complement system in neural plasticity - new treatment opportunities
9.40-10.00 Discussion
10.00-10.20 Break
10.20-11.00 **Christoph Harms, Charité Berlin, Germany:**
STAT3 signaling and handling of stress by astrocytes and other brain cells.
11.00-11.20 Discussion
11.20-11.40 Break
11.40-12.20 **Yosef Gruenbaum, Alexander Silberman Institute of Life Sciences, Hebrew University of Jerusalem, Israel:**
Changes in cell rheology - a neglected parameter in disease pathogenesis and an opportunity for novel therapies
12.20-12.40 Discussion
12.40-13.40 Lunch
13.40-15.10 Free time (ad hoc discussions, time with the teachers,…)
15.10-15.50 **Pavel Hozak, Czech Academy of Sciences, Czech Republic:**
State of the art imaging in the brain - electron microscopy for the 21st century
15.50-16.10 Discussion
16.10-16.30 Break
16.30-17.30 **Discussion Panel II:** Novel insights into the communication of astrocytes with other CNS cells - targets for new therapies
(Jean Pierre Julien, Marcela Pekna, Christian Göritz)
17.40-18.55 Dinner
19.00-21.30 **Poster session with social program**

Friday, May 5
9.00-9.40 **Ole Petter Ottersen, University of Oslo, Norway:**
Astrocytes and osmotic control of the CNS - connections to food uptake, sleep and neurological diseases
9.40-10.00 Discussion
10.00-10.20 Break
10.20-11.00 **Serge Przedborski, Columbia University, USA:**
Molecular understanding of astrocyte neurotoxicity in ALS
11.00-11.20 Discussion
11.20-11.40 Break
11.40-12.40 **Discussion Panel III (the Peter Eriksson Foundation panel):** Astrocytes talking to and controling blood vessels - implications for stroke and CNS regeneration
(Ole Petter Ottersen, Serge Przedborski, Robert Zorec)
12.40-13.50 Lunch
13.50-15.20 Free time (ad hoc discussions, time with the teachers,…)
15.20-16.00 **Robert Zorec, University of Ljubljana, Slovenia:**

State-of-the-art technology for tracking endosomes, lysosomes and other membranous entities in astrocytes
16.00-16.20 Discussion
16.20-16.40 Break
16.40-17.20 **Jean Pierre Julien, Université Laval, Québec, Canada:**
ALS - today's understanding of molecular pathogenesis, and astrocytes as a novel target
17.20-17.40 Discussion
18.30-20.30 Farewell Dinner
20.30-22.00 **Poster session**

Saturday, May 6
9.00-9.40 **Christian Göritz, Karolinska Institute, Stockholm, Sweden:**
Reactive astrocytes and pericytes as elements in scaring and repair after CNS injury
9.40-10.00 Discussion
10.00-10.20 Break
10.20-11.00 **Albee Messing, University of Wisconsin-Madison, USA:**
Targeting astrocytes as a treatment strategy in Alexander disease and other neurodegenerative diseases
11.00-11.20 Discussion
11.20-11.40 Break
11.40-12.20 **Discussion Panel IV:** The Training school evaluation, networking (the COST action *EuroCellNet,* the 2018 Gordon Conference on Intermediate Filaments in Italy)
(**Elly Hol, Ulrika Wilhelmsson, Milos Pekny, Pavel Hozak and Yossi Gruenbaum**)
12.20-13.30 Lunch