



COST is supported by
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**The COST Action EuroCellNet
CA15214**

Training School (Preliminary Program)

**New technological tools for the study of cytoplasmic intermediate
filaments in the central nervous system in health and disease**

On-line

Sweden and the Netherlands, 23-26 March 2021

Organizers:

Elly Hol, Marcela Pekna, Ulrika Wilhelmsson and Milos Pekny

University of Utrecht, The Netherlands,
and University of Gothenburg, Sweden

Tuesday, March 23

Imaging technologies

Chair: Elly Hol

14.00-14.30 Kristian Franze, University of Cambridge, UK

CNS stiffness, cell rheology and glial scars as key factors in neurological diseases - pathophysiological implications and novel targets

14.30-14.50 Discussion

14.50-15.10 Break

15.10-15.40 Jin Moo Lee, Washington University, St. Louis, USA

Photoacoustic microscopy and other novel imaging opportunities for glial cells

16.40-16.00 Discussion

16.00-16.20 Break

16.20-16.50 David Stray, Albert Einstein's College of Medicine, New York, USA

Cytoskeleton and gap junctional coupling - experimental tools and questions to ask

16.50-17.10 Discussion

Wednesday, March 24

Chair: Milos Pekny

Imaging technologies

9.00-9.30 **Mathias Hoehn, Germany**

State-of-the art imaging of brain connectivity

9.30-9.50 Discussion

9.50-10.10 Break

10.10-10.40 **Pavel Hozak, Czech Republic**

Tools to address the interactions between cytoplasmic intermediate filaments and nucleus of brain cells

10.40-11.00 Discussion

11.00-11.20 Break

11.20-11.50 **Jan Mulder, Sweden**

Tissue microarray-based approach to study disease-induced changes in protein distribution

11.50-12.10 Discussion

12.10-13.20 Lunch break

Novel models

13.30-14.00 **Itamar Harel, Israel**

Killifish and nanofilaments in the brain, a novel system to model brain disease pathogenesis and getting insight into aging

14.00-14.20 Discussion

14.20-15.20 **2 min presentations by the attendees (why to come to see my poster)**

15.20-16.20 **Poster presentations (slack)**

16.20-17.20 **Meet the Expert**

Thursday, March 25

Novel models

Chair: Ulrika Wilhelmsson

9.00-9.30 Henrik Ahlenius, University of Lund, Sweden

Generation of iPS cell-derived neurons and glial cells, now made easier

9.30-9.50 Discussion

9.50-10.10 Break

10.10-10.40 Elly Hol, University of Utrecht, the Netherlands

Brain organoids with microglia included - a new tool to address the role of the nanofilament system

10.40-11.00 Discussion

11.00-11.20 Break

11.40-12.10 Mikael Kubista, Czech Academy of Sciences, Czech Republic

Transcriptome-wide gene expression profiling at a single cell level and RNAseq as tools to dissect molecular pathogenesis of diseases - the state-of-the art technologies of today

12.10-12.30 Discussion

12.30-13.20 Lunch break

13.20-14.20 2 min presentations by the attendees (why to come to see my poster)

14.20-15.20 Poster presentations (slack)

15.20-16.20 Meet the Expert

Friday, March 26

Chair: Marcela Pekna

Translation

9.00-9.30 Dolores Pérez-Sala, Centro de Investigaciones Biológicas M. Salas, Madrid, Spain

Post-translational modifications of GFAP and other astrocyte intermediate filament proteins, and their potential pathophysiological relevance

9.30-9.50 Discussion

9.50-10.10 Break

10.10-10.40 Milos Pekny, University of Gothenburg, Sweden

Astrocyte intermediate filaments (nanofilaments) and the two-edged sword of reactive gliosis

10.40-11.00 Discussion

11.00-11.20 Break

11.20-11.50 Ryan Hicks, AstraZeneca, Sweden

Collaborative opportunities in astrocyte research between

11.50-12.10 Discussion

12.10-12.30 Break

12.30-13.00 Alex Verkhratsky, University of Manchester, UK

The impact of astrocyte-centered views on neurology
Academia and Big pharma

13.00-13.20 Discussion

13.20-14.00 Final discussion of the Training school, presentation of the relevant collaborative networks