

Modern Methods in Life Science and Reporters in Drug Research- Examples of how to reduce the number of animals and increase the research quality

*The objective of the symposium and the course is to give an overview and examples of the current state-of-the-art in basic biological and pharmacological research and drug development with a focus on science excellence, research quality, refinement, reduction and replacement of animal experiments. The training is organized by the Doctoral Programme in Drug Research, DPDR-302 (University of Helsinki) and the 3R Working Group of the National Committee for the Protection of Animals Used for Scientific Purposes, Ministry of Agriculture and Forestry. **No registration fee.***

Time December 10th, 17th and 18th, 2020

Target group: researchers, Ph.D. and M.Sc. students. 3 ECTS (lectures, workshop and exam)

Registration via:

<https://elomake.helsinki.fi/lomakkeet/108400/lomakkeet.html>

Video connection via Zoom and instructions will be sent to those registered.

December 10, 2020.

8.55-9.00 Opening words
Dr. Raimo K. Tuominen University of Helsinki, Finland

Theme: 3R

9.00-9.30 Why 3R is important
Dr. Outi Vainio, University of Helsinki, Finland

Theme: Hot topic in drug research

9.30 – 10.15 Transgenic and humanized mice in vaccine development
Dr. Erkki Ylösmäki

Theme: What is new in Helsinki?

10.30-11.00 Metabolic regulation of human neocortical development and evolution
Dr. Takashi Namba, University of Helsinki, Finland

Theme: A way to reduce the use of experimental animals is to improve image analysis techniques

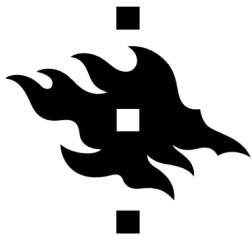
11.00-12.00 High Content Image Analysis (HCA) and its Applications
Dr. Kenneth Mundus Seistrup, Molecular Devices

Break

14.15-15.00 High content image analysis in mouse dopamine neurons, an example from cell profiler, GDNF and preformed alpha-synuclein fibrils
Dr. Piotr Chmielarz, University of Krakow, Poland

15.00-16.00 HCA examples from cardiac pharmacology and toxicology
Dr. Virpi Talman, University of Helsinki

16.00-16.45 High-content image analysis from iPSC-derived human neurons
Dr. Timothy Spicer, The Scripps Research Molecular Screening Center, Florida, USA



December 17, 2020

Theme: New techniques – refinement

11.00-12.00 Parkinson's disease research: Lessons learned from the human brain

Dr. Laura Parkkinen, University of Oxford, Parkinson Research

12.00-13.00 Example of refinement – medial forebrain bundle 6-OHDA model in mice

Dr. Outi Salminen, University of Helsinki

13.00-13.40 The glymphatic system – studying the flow of cerebrospinal fluid

Dr. Tuomas Lilius, University of Helsinki

Break (Note Wihuri symposium)

Theme: New techniques – refinement

16.00-17.00 Measuring bioluminescence from live animals

Dr. Brandon K. Harvey, NIDA, NIH, USA

Theme: Publishing results

17.00-17.45 How Journals Handle Your Paper: Perspectives From a Former Editor-in-Chief

Dr. Eric M Prager, USA

17.45-18.30 Approaching Significance: How to Appropriately Present Your Statistics in Journal Manuscripts

Dr. Eric M Prager, USA

Theme: New techniques – refinement

19.00-19.45 CRISPR-mediated live imaging of genome editing and transcription

Dr. Stanley Qi, Stanford University, CA, USA

December 18, 2020

Theme: Analyzing and publishing results

10.00-12.00 Power analysis workshop

Dr. T. Petteri Piepponen, University of Helsinki, Finland

12.00-13.00 Everything You Always Wanted to Know About Publishing a Paper - the view from behind the scene

Dr. Cristophe Bernard, Editor in Chief eNeuro

Institut de Neurosciences des Systèmes, Aix-Marseille Université

Organizing committee: Dr. Mikko Airavaara (University of Helsinki), Dr. Kristiina Haasio (National Committee for the Protection of Animals Used for Scientific Purposes, MMM), Dr. Raimo K. Tuominen (University of Helsinki)

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3R CONSORTIUM
FINLAND



doctoral programme
in drug research