

Fluorescence microscopy for amyloid fibril imaging

23rd-25th May 2022

Linköping University, Linköping, Sweden (LiU- ProLinC)

Fluorescence spectroscopy using fluorescent amyloid ligands is a versatile tool for detection, monitoring and discrimination of amyloid formation in both test tube and tissue samples. This ESC focuses on spectroscopy in the microscope, also known as hyperspectral imaging. Hyperspectral imaging can be performed both on tissue sections, fixed cells as well as isolated or *in vitro* generated amyloid fibrils.

The participants are encouraged to bring their own samples and fluorescent ligands. Samples can either be prepared in the home lab or be prepared on site within the framework of the course. A set of samples for demonstration will be provided by the organizers.

The course will contain both theoretical lectures, instrument demonstrations and practical exercises.

- Topics to be covered in the *tutorial lectures*:

The need of probes for amyloid diseases and fibril polymorphisms. Overview of fluorescent amyloid ligands. Fluorescence properties of amyloid ligands. Sample preparation. Imaging techniques: Hyperspectral imaging, Filter based imaging, Fluorescence life time imaging

- *Hands on exercises and instrument demos*:

Sample preparation. Hyperspectral imaging. Confocal microscopy. Fluorescence lifetime.

Other details: The course is aimed at trainees with little experience in the domain of people wanting to acquire new scientific and technical skills: graduate and PhD students, post-doctoral fellows, early career scientists, technicians, core facility staff. Registration to the course will be free of charge, with limited financial support available for participants.

Visit the website to find out more and to apply to take part in the course.

<https://www.mosbri.eu/training/end-user-short-courses/esc2/>