

GGNB Extended Methods Course

BIOANALYTICS

Date: 26 April – 07 May 2010

Participants: 8

Preference in the course assignment will be given to students interested in the entire course (2 weeks). It is possible though to participate in sub-segments of the course, if the number of participants allows for it.

Week 1 (26–30 April 2010)

Day 1-2 (26.04. – 27.04.) Tittmann group

Topic: Rapid reaction techniques and kinetic analysis of biochemical processes

Techniques: Single mixing and sequential mixing stopped-flow absorption spectroscopy using diode array and photomultiplier detection, chemical quenched-flow

Lecture: 26.04., 9 – 10 a.m., GZMB

Training: 26.04., 10 – 16 h, GZMB

27.04., 09 – 16 h, GZMB

Day 3-4 (28.04. – 29.04.) Tittmann group & PD Dr. Ralph Golbik, Halle University

Topic: Thermodynamics and kinetics of protein folding

Techniques: Fluorescence spectroscopy, circular dichroism spectroscopy, stopped-flow fluorescence

Lecture: 28.04., 9 – 10 a.m., GZMB

Training: 28.04., 10 – 16 h, GZMB

29.04., 09 – 16 h, GZMB

Day 5 (30.04.) Dr. Wolfgang Fischle, MPI for Biophysical Chemistry

Topic: Biophysical characterization of biomolecular interactions

Techniques: Ultracentrifugation, fluorescence polarisation

Lecture: 30.04., 9 – 10 a.m., GZMB or MPI-bpc (tba)

Training: 30.04., 10 – 16 h, MPI-bpc



Week 2 (3–7 May 2010)

Day 1 (03.05.) Dr. Wolfgang Fischle, MPI for Biophysical Chemistry

Topic: Biophysical characterization of biomolecular interactions

Techniques: Ultracentrifugation, fluorescence polarisation

Training: 03.05., 9 – 16 h, MPI-bpc

Day 2 (04.05.) Dr. Karin Kühnel, MPI for Biophysical Chemistry

Topic: Protein crystallography

Techniques: Robot-assisted protein crystallization, crystal mounting, data collection

Lecture: 04.05., 9 – 10 a.m., GZMB or MPI-bpc (tba)

Training: 04.05., 10.30 – 16 h, MPI-bpc

Day 3-5 (05.05. – 07.05.) Dr. Henning Urlaub, MPI for Biophysical Chemistry

Topic: Quantitative analysis of proteins and protein complexes

Techniques: Advanced protein mass spectrometry

Lecture: 05.05., 9 – 10 a.m., GZMB or MPI-bpc

Training: 05.05., 10.30 – 16 h, MPI-bpc

06.05., 09 – 16 h, MPI-bpc

07.05., 09 – 16 h, MPI-bpc