

Schedule Basic Course I – WS 2016/17

Monday, 3.10. 09:00 - 12:30

Chemistry of non-covalent interactions and structural building blocks in proteins (**Haltrich**)
Protein diversity – evolution of structure and function (**Haltrich**)

Tuesday, 4.10. 09:45 - 13:00

Protein libraries: design and construction (**Rüker**)
Surface display technologies (**Rüker**)

Wednesday, 5.10. 09:00 - 12:45

Mutagenesis I: Site-directed mutagenesis, saturation mutagenesis, cassette mutagenesis (**Peterbauer**)
Mutagenesis II: Directed evolution by non-recombinative and recombinative methods (**Peterbauer**)

Thursday, 6.10. 09:00 - 12:45

Screening criteria and methods (**Peterbauer**)
Case study: Engineered therapeutic antibodies (**Rüker**)

Monday, 10.10. 09:00 - 12:45

Folding pathways, conformational and thermal stability of proteins (**Obinger**)
Measurement of changes in stability – differential scanning calorimetry and isothermal titration calorimetry (**Obinger**)

Tuesday, 11.10. 09:00 - 12:45

Protein structure IV: Self-assembling proteins - Light scattering and electron microscopy (**Schäffer**)
Protein structure III: Electronic circular dichroism, fluorescence and Fourier transform infrared spectroscopy of proteins (**Obinger**)

Wednesday, 12.10. 09:00 - 12:45

Measurement of protein – ligand (protein) interaction: surface plasmon resonance and atomic force microscopy (**Schäffer**)
Enzyme kinetics: steady-state *versus* presteady-state kinetics (**Obinger**)

Thursday, 13.10. 09:00 - 12:45

Protein structure I: X-ray crystallography (**Djinovic-Carugo**)
Protein structure II: Nuclear magnetic resonance (**Kosma**)