

Summer School on Directed Evolution of Proteins

2nd – 12th May 2023, Košice

1st Week

Methods: Error Prone PCR, Restriction digestion, PCR purification, Ligation, Agarose electrophoresis, Gel extraction and purification, Cell transformation

Tuesday 2.5.2023

9:00 Erik Sedlák Welcome and opening remarks
9:05-9:50 Andreas Plückthun Protein evolution
10:05-10:50 Daniel Rozbesky Mammalian cell-based protein production
11:05-11:50 Lenka Džurová Molecular Farming in Barley
12:00-13:00 Lunch
13:00-13:30 Occupational Safety and Health (OSH)
13:30-14:00 Mária Tomková Evolution of thrombolytic drug staphylokinase by ribosome display
14:00-17:00 Work in a laboratory

Wednesday 3.5.2023

9:00-9:45 Martin Toul Rational protein engineering driven by kinetics
10:00-10:45 Michal Nemergut Identifying a new aggregation hotspot in Alzheimer's disease : Opportunities for drug discovery
11:00-11:45 Ľuboš Ambro Production and purification of recombinant proteins: pitfalls and problem solving
12:00-13:00 Lunch
13:00-17:00 Work in a laboratory

Thursday 4.5.2023

9:00-9:45 Stanislav Stuchlík Solubility as a challenge for expression and purification of recombinant proteins
10:05-10:50 Rostislav Škrabana Preparation of intrinsically disordered proteins
11:05-11:50 Veronika Hovanová From macroscopic measurements to microscopic events
12:00-13:00 Lunch
13:00-17:00 Work in a laboratory

Friday 4.5.2023

9:00-9:45 Gabriel Žoldák The application of nanomechanical studies for protein engineering
10:00-10:45 Veronika Huntošová Fluorescence and imaging of proteins in cells
11:00-11:45 Erik Sedlák Genetically encoded photosensitizers
12:00 Erik Sedlák Closing remarks
12:00-13:00 Lunch
13:00-16:00 Work in a laboratory

Saturday + Sunday 5. - 6.5. 2023

Self-study, summarization of results, preparation of presentation

2nd Week

Tuesday 9.5.2023

8:00-12:00 Plasmid isolation, Preparation for ribosome display
12:00-13:00 Work in a laboratory
13:00-17:00 Lunch
Work in a laboratory

Wednesday 10.5.2023

8:00-12:00 Ribosome display – illustration
12:00-13:00 Work in a laboratory
13:00-17:00 Lunch
Work in a laboratory

Thursday 11.5.2023

8:00-12:00 Ribosome display - practice (summer school participants)
12:00-13:00 Work in a laboratory
13:00-17:00 Lunch
Work in a laboratory

Friday 12.5.2023

9:00-12:00 Presentations, closing remarks
12:00-13:00 Lunch



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