Preliminary Program

May 30th, 2022

14:00-18:00 *Practical tutorial: "Protein engineering tools: FoldX "*
         Javier Delgado and Damiano Cianferoni | Centre for Genomic Regulation (CRG)

The goal of the tutorial is to provide P4EU members with a short training on one of the most used protein engineering software, released in 2005 FoldX established as a standard tool for measuring the effect of point mutations and is now being expanded into ModelX as a general protein design tool-suite. During this tutorial, we will focus on the pillars of foldX, looking both at theoretical and practical aspects, having the opportunity to learn the best use of the software directly from the creators.

May 31th, 2022

09:30-9:40 *Welcome by Carlo Carolis CRG*

Session 1

09:40-10:15 **Bacterial expression of a designed single-chain IL-10 prevents lung inflammation caused by Pseudomonas aeruginosa**

         Luis Serrano, Director | Centre for Genomic Regulation

10:15-10:50 **The study of interfaces of protein-structures to understand/predict the functional role of proteins**

         Baldo Oliva | Pompeu Fabra University (UPF)

10:50-11:20 Networking Café

11:20-11:55 **Building proteins from the ground up: challenges and opportunities of de novo designed proteins**

         Enrique Marcos | Institute of Molecular Biology of Barcelona (IBMB)

11:55-12:30 **Update of the prokaryotic translation regulation**

         Jae-Seong Yang | Centre for Research in Agricultural Genomics (CRAG)

12:30-14:00 Lunch & sponsorship visit session

Session 2

14:00-14:35 **How MultiBac unlocked COVID19 antiviral and vaccine research in the Berger lab in Bristol**

         Imre Berger | University of Bristol

14:35-15:10 **Purification and characterization of native and recombinant gamma-tubulin ring complex**

         Thomas Surrey | Centre for Genomic Regulation

15:10-15:45 **Strategies for Chemical Protein Labeling**

         Jan-Erik Hoffmann | MPI Dortmund

15:45-16:15 Café

16:15-16:50 **Overcoming the surface exposure barrier with enhanced yeast display platform**

         Jiri Zahradnik | Weizmann Institut of Science

16:50-17:15 **Recombinant receptor binding proteins of bacteriophages as versatile tools for pathogen detection**

         Peter Braun | Bundeswehr Institute of Microbiology

17:15-17:50 **Cell-free production of G-protein coupled receptors for functional and structural studies**

Frank Bernhard | Goethe University Frankfurt

17:50-18:25 **Next Generation and Virtual Reality assisted training tools and their application potential**

Damjana Kastelic & Jonas Krebs | Centre for Genomic Regulation

18:25-19:00 **Opportunities for biologists at the ALBA Synchrotron**

Fernando Gil Ortiz | ALBA Synchroton

June 1st, 2022

Session 3

09:30-10:00 **ÄKTA™ and Biacore™: Enabling protein purification and characterization at microscale range** *(sponsored talk)*

Enrique Garcia & Néstor Santiago | CYTIVA

10:00-10:30 **Fida 1 – a Multifaceted Biophysics Platform Ideal for Membrane Proteins** *(sponsored talk)*

Hasse Hedeby | FIDA BIOSYSTEMS

10:30-11:00 I**s my protein alright? A journey from lysis to storage!** *(sponsored talk)*

Pierre Soule | NANOTEMPER

11:00-11:30 Café

11:30-12:00 **Find and cut-and-transfer (FiCAT) mammalian genome engineering**

Avencia Sánchez-Mejías | Integra Therapeutics

12:00-12:30 **Reliable Scale Up with Orbital Shaken Bioreactors** (sponsored talk)

Tatjana Tufedzic | KUHNER

12:30-13:00 **Proteoshell, a capsid-based assistant for challenging protein expression** *(sponsored talk)*

Xavier Garrabou | LOCK & KEY BIOSCIENCES

13:00-14:00 Lunch

Session 4

14:00-16:00 **P4EU discussion (only for members)**

P4EU members