FEBS Practical Course

PC24-047

Advanced Methods in MACROMOLECULAR CRYSTALLIZATION X

10th anniversary edition of the course, 2004 - 2024

Organized with support of FEBS, Faculty of Science University of South Bohemia Ceske Budejovice, Czech and Slovak Crystallographic Association, Czech Society for Structural Biology, CIISB and other commercial companies

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Czech Republic | Ceske Budejovice |

Faculty of Science, University of South Bohemia

Application deadline

10 April, 2024

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https://macromolcryst2024.febsevents.org

TOPICS

PROTEIN EXPRESSION, PURIFICATION AND PROTEIN CRYSTALLIZATION ◆ PROTEIN AS THE MAIN VARIABLE IN CRYSTALLIZATION ◆ INTRODUCTION TO PROTEIN CRYSTALLIZATION ◆ PRINCIPLES OF PROTEIN CRYSTALLIZATION: THE NATURE OF PROTEIN CRYSTALS AND THE PHYSICAL CHEMISTRY OF THEIR FORMATION ◆ NUCLEATION OF PROTEIN CRYSTALS ◆ MORPHOLOGY AND CRYSTAL GROWTH MECHANISMS ◆ PRINCIPLES OF PROTEIN CRYSTALLIZATION: METHODS, EVALUATION, AND PROPERTIES OF 'REAL' CRYSTALS ◆ PREPARATION OF PROTEIN SAMPLES FOR CRYSTALLIZATION EXPERIMENTS ◆ PROTEIN CRYSTALLIZATION SCREENING ◆ ADVANCED LIGHT SCATTERING METHODS ◆ CRYSTALS FOR XFEL ◆ CONVENTIONAL CRYSTALLIZATION METHODS AND THEIR MODIFICATIONS ◆ INTRACELLULAR PROTEIN CRYSTALLIZATION ◆ CRYSTALLIZATION UNDER OIL ◆ ADVANCED CRYSTALLIZATION TECHNIQUES ◆ COUNTER DIFFUSION METHODS FOR PROTEIN CRYSTALLIZATION AND SCREENING ◆ LIPIDIC CUBIC PHASE CRYSTALLIZATION ◆ MICROSEEDING WITH AUTOMATIC SYSTEMS ◆ PREPARATION OF MICRO- AND NANOCRYSTALS FOR FREE-ELECTRON-LASER AND SYNCHROTRON RADIATION SOURCES ◆ NANOCRYSTALS FOR FUTURE APPLICATION ◆ MEMBRANE PROTEIN CRYSTALLIZATION ◆ INTERPRETATION OF THE CRYSTALLIZATION DROP RESULTS ◆ MOLECULAR MECHANISMS OF DNA REPAIR ◆ EVALUATION OF CRYSTALLIZATION WITH UVEX MICROSCOPE ◆ SINGLE PARTICLE CRYO-EM ◆ CRYSTALLIZATION AND CRYSTALLOGRAPHIC ANALYSIS IN A MICROFLUIDIC CHIP ◆ ILLUMINATING THE SCREENING PROCESS WITH FLUORESCENCE ◆ TIPS AND TRICKS FOR PROTEIN CRYSTAL MANIPULATION ◆ CRYSTAL MOUNTING AND FREEZING ◆ OPTIMIZATION OF CRYPTIC LEADS DERIVED FROM TRACE FLUORESCENT LABELING SCREENING ◆ SEEDING STRATEGIES FOR "RANDOM" CRYSTAL SCREENING AND CRYSTAL OPTIMIZATION SCREENING THE DIFFRACTION QUALITY OF PROTEIN CRYSTALS ◆ LARGE VOLUME CRYSTAL GROWTH IN RESTRICTED GEOMETRY FOR NEUTRON CRYSTALLOGRAPHY ◆ OPTIMIZATION OF CRYSTAL GROWTH FOR NEUTRON CRYSTALLOGRAPHY ◆ USING AI IN PROTEIN CRYSTALLOGRAPHY ◆ IN VIVO CRYSTALLIZATION ◆