

Announcement

The PSI Protein Production Platform (P4)

Benoit, RM et al, (2014) Structural basis for recognition of synaptic vesicle protein 2C by botulinum neurotoxin A, *Nature* 505, 108-111; DOI: 10.1038/nature12732



The PSI Protein Production Platform (P4) of the Biology and Chemistry Department (BIO) is a research facility specialized in recombinant protein production, with state-of-the-art equipment and a team of highly skilled and dedicated professionals with extensive experience in protein expression and purification. P4 collaborates with research groups in Switzerland and world-wide and also offers recombinant protein production on a fee-for-service basis. Together with the PSI Crystallization Facility, P4 represents the “gene-to-structure”

pipeline designed to cover all steps from cloning to rapid mutant generation, biophysical and functional studies, as well as X-ray data collection at the SLS and high-resolution structure determination. We aim to provide the best possible advice on construct design, expression systems and vectors for each project to warrant optimal results. We offer recombinant protein production in bacterial, insect and mammalian cells (<http://www.psi.ch/lbr/psi-protein-production-platform-p4>).

Macromolecular Crystallisation Facility at the PSI

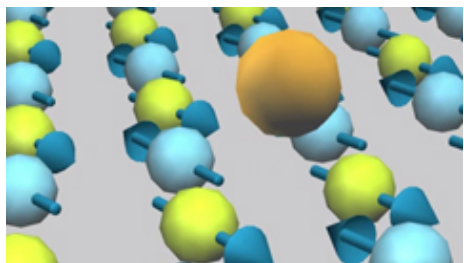
The Macromolecular Crystallisation Facility at the PSI is maintained by the SLS and the BIO department. The facility is situated at the X06DA beamline. The facility is equipped for robotic crystallization screening by sitting-drop vapour diffusion or lipidic cubic phase using two TTP Labtech Mosquito LCP robots situated at 4 and 20°C. We offer different modes of access for different users: we can set up experiments for users who provide macromolecular material, we can provide training in robotic crystallisation screening and imaging for new users who will make regular use of the facility, and we can provide experimental advice to more experienced scientists. Access to the facilities for European users with an interest in eukaryotic membrane protein expression and/or crystallization is funded by the BioStruct-X programme (<http://www.biostruct-x.eu/>).

Research highlight

Puzzling new behaviour observed in high-temperature superconductors

New effect might be important for emergence of High-Temperature Superconductivity

W. S. Lee et al, *Nature Physics*, advance online publication 19 October 2014; DOI: 10.1038/nphys3117



An international team of researchers from SLAC National Accelerator Laboratory and Stanford University (both California) and the Paul Scherrer Institute (Villigen, Switzerland) has observed a new, unexpected kind of behaviour in copper-based high-temperature superconductors – materials that are capable of conducting electric current without any loss when cooled to low enough temperatures. Explaining the new phenomenon - a new, unexpected form of collective movement of the electrical

charges in the material - poses a major challenge for the researchers. A success in explaining the phenomenon might be an important step toward understanding high-temperature superconductivity in general. The crucial experiments were conducted at the Paul Scherrer Institute’s Swiss Light Source.