

Protein Characterization, Crystallization and Structure Determination at the Lund Protein Production Platform

Lund Protein Production Platform (LP3, www.lu.se/lp3) is a cross-faculty expert center and user facility of Lund University (LU). As such, we provide services and make equipment available in the areas of recombinant protein production, crystallization, biophysical characterization, and structure determination. We also act as the LU node of a new national distributed research infrastructure for protein production: Protein Production Sweden (PPS, www.gu.se/pps) and we are one part of MAX IV FragMAX platform for X-ray aided fragment screening (<https://www.maxiv.lu.se/fragmax/>). In addition, we provide the laboratories for the biological part of the Deuterium and Macromolecular Crystallization (DEMAX, <https://europeanspallationsource.se/science-support-systems/demax>) platform of the European Spallation Source ERIC (ESS) and closely collaborates with DEMAX. At our facilities we have an attractive selection of automated equipment for crystallization experiments, among these the Dragonfly and Mosquito (SPT Labtech), for optimization screen preparations and nanoliter crystallization set ups, as well as Rigaku automatic imaging system, for monitoring experiments over time using both visible and UV light. We also have a range of analytical methods ready to evaluate the quality of your protein sample, or alternatively improve your sample's formulation for increased stability, including the Omnisec (Malvern Panalytical) (for measuring absolute molecular weight and sample composition) and the Prometheus (Nanotemper), for temperature stability evaluation. We can also offer harvesting and testing of your crystals at BioMAX (MAX IV), and assist in data processing and structure determination. Our aim is to give our users custom-made solutions to match their needs in order to help them move forward in their research.

For more information and access to protein characterization, crystallization and structure determination: <https://www.lp3.lu.se/protein-crystallisation-and-characterisation> (lp3@biol.lu.se).

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