Elettra 2.0: New Structural Biology Opportunities

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The EMBL Protein Expression and Purification Core Facility: bringing structural biology tools to the non-structural biology community

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The goal of the EMBL Protein Expression and Purification Core Facility is to provide high-level services and advice regarding all aspects of protein expression, purification and characterisation. We aim to support our users with all individual steps of the workflow, going from the choice of the expression host organism and construct design to small scale screening, expression scale-up and protein purification using a combination of chromatographic methods to protein quality control and biophysical characterisation. We are based at EMBL Heidelberg and are embedded in the local Structural and Computational Biology unit, which allows us to stay up-to-date of the latest developments in structural biology. We also work closely with our colleagues at EMBL Hamburg and EMBL Grenoble, whose laboratories are located on the German Synchrotron Research Centre (DESY) campus and the European Synchrotron Radiation Facility (ESRF) campus, respectively. Even though we cooperate frequently with the different EMBL structural biology groups and facilities across the EMBL sites, one of our core tasks is to make structural biology tools accessible to the non-structural biology community as well. We collaborate with research groups from a large variety of scientific disciplines that are typically not immediately associated with structural biology, ranging from developmental biology, neurobiology and medicine to marine biology, planetary biology and human ecosystems. We produce samples for structural characterisation by NMR, crystallisation and cryo-electron microscopy, but also for other applications such as nanobody/antibody generation and biochemical or biophysical experiments. By doing so, we hope to assist these research groups in introducing more interdisciplinary approaches into their projects as well.

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