

EMBL @ PETRA III

EMBL Hamburg operates an Integrated Facility for Structural Biology on the DESY campus in Hamburg-Bahrenfeld, providing both academic and industrial users with a pipeline of expertise and state-of-the-art facilities for structural biology applications using synchrotron radiation.

The facility offers two state-of-the-art beamlines for macromolecular X-ray crystallography as well as complementary facilities for Sample Preparation and Characterisation, High-Throughput Crystallisation and X-ray data processing and evaluation.

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EMBL @ PETRA III

Integrated Facility for Structural Biology

Industrial Services in
Macromolecular Crystallography

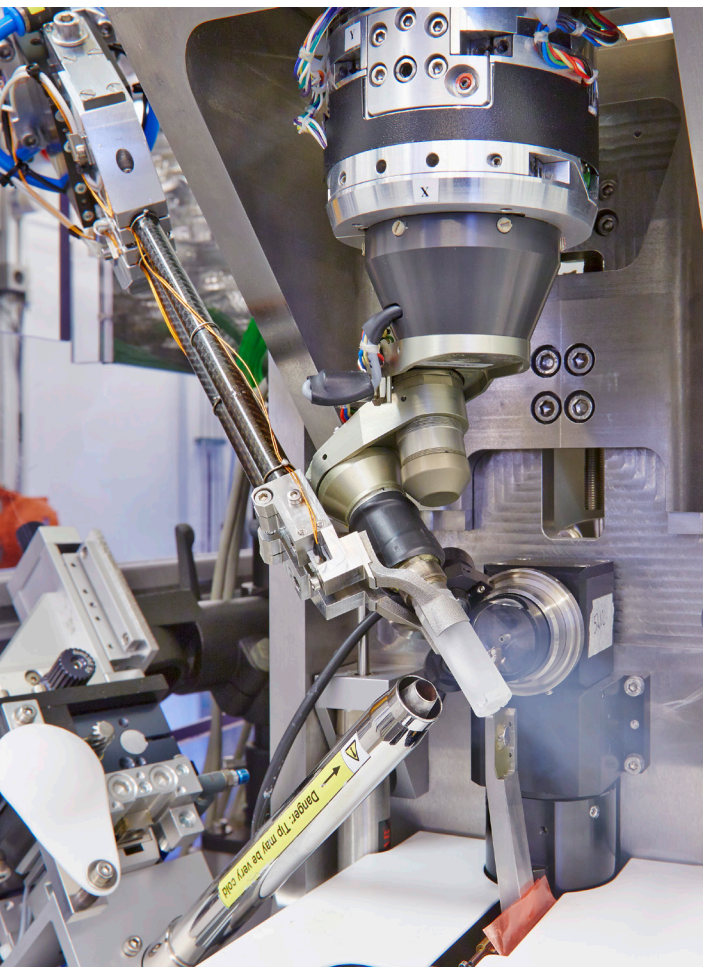


Photo source DESY / R. Schaaf

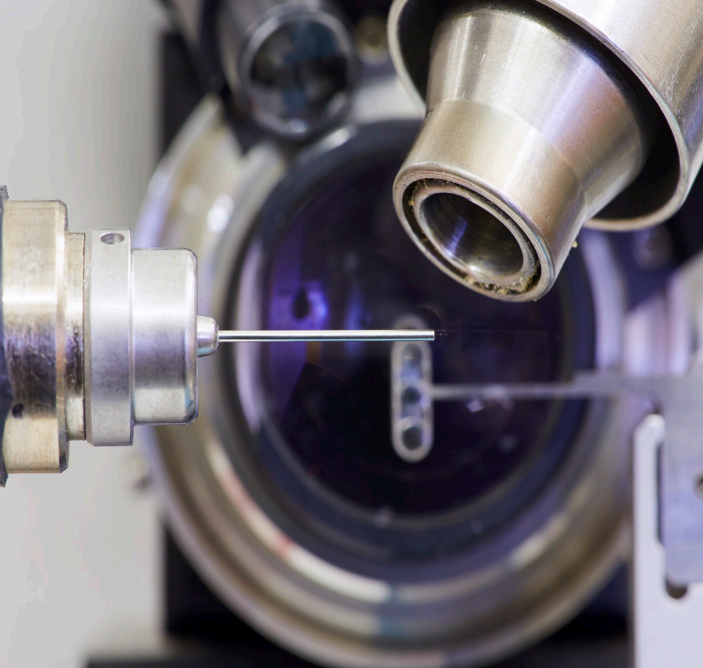
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European Molecular Biology Laboratory
Laboratoire Européen de Biologie Moléculaire
Europäisches Laboratorium für Molekularbiologie





OUR SERVICES

We offer a pipeline for structure determination with various entry and exit points.

Beamtime only

For experienced crystallographers who wish to carry out their experiments themselves. Of course, an experienced member of our team will be there to provide you with the necessary technical support during the experiment.

Remote Access

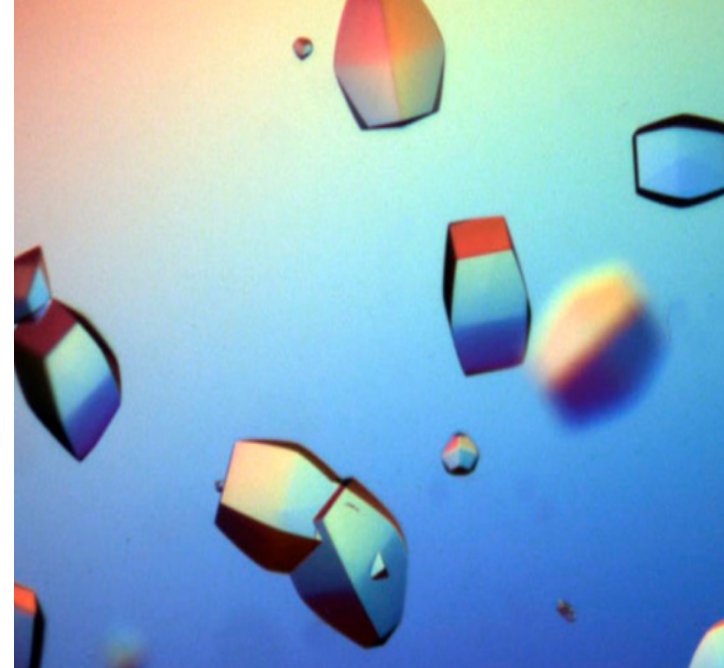
For researchers who need additional flexibility, we provide remote access services allowing data collection from home. All you have to do is ship your samples to us and you will be assigned a member of our team that will handle your samples with care and assist you when needed during data collection. Experiments are carried out entirely by you via a network connection.

Mail-in Data Collection

Using Mail-in data collection service allows you to ship your samples to us and our experienced team members will do the rest. Depending on your requirements, you will receive the collected data from us in raw and / or processed format.

Custom solutions

Do you need to carry out demanding measurements? Or you feel that you need help with experimental design? Contact us and we will help you find the solution specifically tailored to your needs!



Macromolecular Crystallography

The EMBL Beamlines P13 and P14 on the PETRA III Synchrotron DESY, Hamburg provide optimum conditions for X-ray diffraction data collection:

- Ultimate-quality data collection on large ($>50\ \mu\text{m}$) crystals with a 'top-hat' profile beam.
- Serial data collection on micro-crystals ($<10\ \mu\text{m}$) at cryogenic temperature or *in situ* in CrystalDirect™ plates.
- Phasing by anomalous diffraction between 18 and 3.8 ke using standard mounting technologies.
- Diffraction data collection from crystals with large unit cells (up to 2000 Å).
- Sub-atomic resolution ($<0.8\ \text{Å}$) data collection.
- Data collection on small molecule crystals.

www.embl-hamburg.de/services/mx/

Sample preparation and characterisation

The EMBL Sample preparation and characterisation facility (SPC) is located next to the beamlines at the PETRA III synchrotron at DESY, Hamburg.

The facility offers a pipeline from the lab to the beamlines, supporting, optimising and preparing samples for structural studies.

- High-throughput screening and optimisation for the crystallisation of soluble and membrane proteins.
- Online real-time inspection of crystallisation plates via the Crystallisation Information Management System (CRIMS).
- CrystalDirect™ technology for robotic harvesting of protein crystals from 96-well CrystalDirect™ plates by means of laser photoablation.
- Biophysical cutting-edge technologies for characterisation of biomolecules and its interactions.

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