

Core Facilities @ EMBL

- Current molecular biology is technology savvy
- Funding of heavy-duty instrumentation is mostly not easy for research groups of EMBL scale
- Economy of centralization enables acquisition of state-of-the-art equipment
- Dedicated, highly qualified staff **support** scientists in their projects *facilitated* by frequent & open interactions with users and synergy among CFs
- “Bottom-up” approach to implementation of new technology to core facilities
- Prices cover the cost of consumables

Core Facilities @ EMBL

- **Advanced light microscopy CF**
- **Electron microscopy CF**
- **Protein expression & purification CF**
- **Proteomics CF**
- **Genomics CF**
- **Chemical biology CF**
- **Flow cytometry CF**

Advanced Light Microscopy Facility



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- The first CF at EMBL, inspiration for the rest; it also set the model for interaction with industry, currently 29 microscope systems
- Teaching and support of users throughout the whole process of image data acquisition, analysis and documentation
- Development of simplified application protocols, e.g. by automation
- Design, set-up, test and offering new equipment in collaboration with industrial partners

Electron microscopy CF



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- Teaching sample preparation for EM and operation of EM instruments to study cell structure and organisation at the EM resolution
- Cryogenic methods
- EM tomography
- Immuno-EM
- Correlative LM-EM

Protein expression and purification CF



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- Production and purification of proteins from E. coli, insect and mammalian cells
- Collection of expression vectors and bacterial strains
- Production of enzymes for daily lab work
- Biophysical analyses (AUCFG, calorimetry)

Proteomics CF



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- Infrastructure for identification and characterization of proteins, individual or in complexes
- Identification of post-translational modifications
- Differential proteome analysis

Genomics CF



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- Assisting scientists with unlocking genomes of their interest and linking genotype with phenotype
- Complete sample processing for:
 - next-gen sequencing
 - microarrays
- Full qPCR support
- Assistance with data analysis
- Liquid handling lab automation
- Fruitfly, nematode, mouse cDNAs

Chemical biology CF



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- Providing academic research groups access to screening small molecule compound collections against their targets
- Identification of novel low molecular weight compounds to use as “biotools” to probe biological function
- Characterization of detected interactions
- Generating added value IP on in-house targets

Flow cytometry CF



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- Sorting heterogeneous populations according to many different criteria (cells, chromosomes) into homogeneous populations for experiments
- Analysis of single cell populations based on fluorescent probes and light intensities

The way to make it work

Contact CF team

**Discuss your
project with CF
experts**

**CF helps you
with your
experiment**

**Analyze and
discuss your
results with us.**

Core Facilities & Services @ EMBL

EMBL's Core Facilities play a crucial role in enabling scientists to achieve ambitious research goals

Core Facilities are staffed by technology experts who focus entirely on service provision for research projects designed and run by others

Focus on delivery of quality services, fast reaction times to user demands, affordable prices

Core Facilities activities are fully driven by EMBL's scientific agenda

Internal surveys to measure the level of user satisfaction

Core Facilities activities are externally reviewed (SAC)

Core Facilities & Services @ EMBL

Our Core Facilities are open to Visitors and we provide a lot of services to academics in the Member States and even outside

The EMBL model for Core Facilities has developed a first-rate reputation in the European sciences community

They contribute significantly to internal and external training courses and workshops, often in collaboration with industrial partners.

Member States frequently seek our advice and guidance in setting up their own Core Facilities & Services to enhance efficiency and effectiveness of their scientific research

For our industry partners, Core Facilities are a clear multiplication factor in terms of business and often a kind of “stamp of approval” for their technologies!