

The Protein Factory



We apply a flexible approach to each single project to significantly reduce the time and ultimately the cost associated with protein production

Facilities available at “The Protein Factory”

1. **Molecular Biology Lab:**

Design of genes from bioinformatic analysis; design and production of construct with different Tag sequences for different purpose (purification, targeting, FRET, etc). Cell culture laboratories. Different microscopy systems.

2. **Protein Expression Lab** (Protein Technology):

Gene design, Protein expression in cell free systems (*E. coli*, insect, rabbit reticulocytes, wheat germ), and over-expression in bacteria, yeast, *Xenopus* oocytes and eukaryotic cells; lab-scale protein expression and purification.

3. **Protein Fermentation Lab** (Industrial Microbiology and Fermentation):

Optimization of bioactive peptides and recombinant protein production. Several incubators of different size, 4 fermentors (from 1.5 to 10L, and larger volumes on request) are available.

4. **Protein Engineering Lab:**

Protein Engineering by means of rational design or directed evolution technologies; screening of mutant libraries for new functions, higher stability, etc...

5. **Protein Biochemistry & Protein Interaction Lab** (Post-Genomics):

Purification and functional and structural characterization of proteins (both native and recombinant). Kinetic investigations. Analysis of the interaction between protein-protein or protein-ligand by means of automated or semi-automated approaches.

6. **Proteomics Lab:**

Proteome analysis of complex samples (e.g. biologic fluids) by means of the most powerful techniques.

7. **Biocatalysis Lab:**

A chemistry synthesis laboratory where protocols employing biocatalysts are specifically customized for industrial applications. Instrumentation includes traditional, membrane and/or hollow fibre reactors specifically adapted for the use of compartmentalized or immobilized proteins.

8. **Nanobiotechnology:**

use of (magnetic) nanoparticles for a variety of purposes, particularly nanomedicine.