Biochemistry for post-genomics

Goal: The identification of proteins as new molecular targets of drugs or toxic compounds takes advantage of the recent advances in genome sequencing. Bioinformatics, transcriptomics and proteomics are used for the high throughput discovery of novel proteins and pathways. In this respect, a "new" biochemistry for post-genomics is needed to obtain practically these targets for functional or structural studies, opening a large field of biotechnological applications.

. What we do

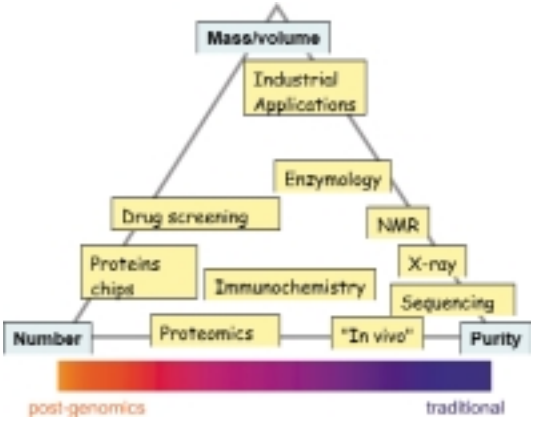
Our biochemical approaches are integrated "from sequence to purified protein" and are developed upon mature or innovative techniques for:

. **production of recombinant proteins** (genetic engineering, overexpression in E.coli, yeasts, CHO, COS, Sf9/baculovirus…, biomass production in 60 liters tanks)

. **purification of native and recombinant proteins**, their folding, and their characterization by biophysical techniques

. **large scale production of polyclonal and monoclonal antibodies** (mice, rats, rabbits, goats)

Specific strategies are developed depending on the choice of high purity, or large number, or high volume of proteins to be produced. The laboratory is focusing on "difficult" proteins, that means membrane proteins, modular proteins, heteromeric complexes as well as post-translationally modified proteins.



. Collaborations

The laboratory of post-genomics and nuclear toxicology promotes research projects in collaboration with public laboratories and with R&D industrial companies. It is labelled ISO 9001:2000 for its research project management in protein biochemistry. In addition, it participates to local organizations of incubators and support to biotechnological start-ups.

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