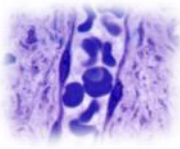
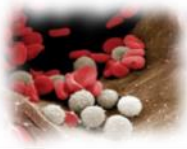
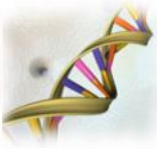
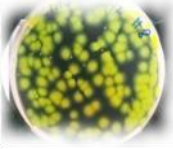

DIPARTIMENTO DI BIOTECNOLOGIE MEDICHE
SCUOLA DI DOTTORATO IN BIOTECNOLOGIE MEDICHE

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International Workshop

Functional and structural properties of proteins: Theory and practice

Prof. André Matagne

Laboratory of Enzymology and Protein Folding
Centre for Protein Engineering, University of Liège, Belgium

Prof. Maximiliano Figueroa

Department of Biochemistry and Molecular Biology
Faculty of Biological Sciences, University of Concepción, Chile

June 20-24, Polo Didattico San Miniato

Lesson schedule: 10:00-13:00

Prof. Gianni Pozzi,
Head, Department of
Medical Biotechnologies

Prof. Lorenzo Leoncini,
Coordinator, Doctoral School in
Medical Biotechnologies

Organizer: Prof. Jean-Denis Docquier, Department of Medical Biotechnologies
(info:* jddocquier@unisi.it - 0577/23 3134*)

Faculty and programme

Prof. André Matagne

University of Liège, Belgium

André Matagne is Full Professor of Enzymology and Protein Folding and Director of the Centre for Protein Engineering. He is the founder of Robotein®, an automated high-throughput biomolecular and biophysical protein analysis platform, part of the European Instruct-ERIC (European Research Infrastructure Consortium for structural biology research) network.

The objective of his course will be to illustrate how optical methods (UV-visible absorption, fluorescence, infrared and circular dichroism) can be used to study protein folding, dynamics and stability. The course will include a review of the optical properties of proteins. Then, concrete examples (e.g. β-lactamases, single-domain antibody fragments, lysozymes) will be analysed in details, on the basis of theoretical background (shortly reviewed during the course) and data found in the literature.

Prof. Maximiliano Figueroa

University of Concepción, Chile

Maximiliano Figueroa is Professor of Biophysics, Biochemistry and Structural Biology. He developed projects in the field of artificial protein design and protein engineering relying on protein structure determination through both experimental (X-ray) and theoretical methods (modelling).

Teaching will be in the area of structural bioinformatics. Structural bioinformatics belongs to computational biology studying the relationship between structure and function with the help of computational tools. In his course, Prof. Figueroa will introduce the field, covering the principles and tools for protein sequence analysis, and secondary and tertiary structure prediction through different methodologies. Students will learn about useful webservers and software used by scientists in the field, and the theory behind them.

Prof. Figueroa will also give a seminar entitled "Artificial protein design: Octarellins as a complex model of study".