Erasmus+
Enriching lives, opening minds.

SEMINARIO

Prof. André Matagne

Laboratory of Enzymology and Protein Folding
Centre for Protein Engineering, University of Liège, Belgium
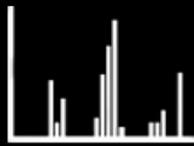
Enhancing Research Data Reproducibility Through Protein Quality Control

21 giugno 2024, ore 12:00
Polo Didattico Le Scotte - Aula 2

Organizzatore: Prof. Jean-Denis Docquier, Dipartimento di Biotecnologie Mediche
(info: jddocquier@unisi.it - 0577/23 3134)

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.

Abstract:

The scientific community aims to enhance transparency and reliability in published research, with a specific focus on the quality of biological reagents, notably recombinant proteins. Concerns have been raised regarding irreproducible results, prompting discussions on common quality issues associated with recombinant proteins and their impact on downstream applications. In response, professionals in protein purification and characterization have collaboratively developed guidelines for improved quality control.

These guidelines include minimal information requirements for protein identity, production parameters, and long-term stability, as well as a minimal set of quality tests for purity, homogeneity, and identity. Additional recommendations cover DNA contamination, "spectral and thermal denaturation signatures", homogeneity, "competent fraction", storage conditions, batch-to-batch reproducibility, and other factors based on intended applications. Evaluation of these guidelines over a one-year period suggests that their implementation can enhance experimental reliability and optimize protein quality. Investing in protein QC benefits all stakeholders in life sciences, including researchers, editors, and funding agencies, by improving data veracity and minimizing resource wastage.