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International Post-Graduate Course on PROTEIN QUALITY CONTROL

Siena, Italy, June 24-27, 2025



A satellite meeting of the
15th European Biophysics Congress



An event sponsored by the **International Union
for Pure and Applied Biophysics (IUPAB)**



Scope of the course and target audience

Purified proteins stand as a central focus in numerous research laboratories, where they are used for a wide spectrum of applications ranging from structural and functional analyses, intermolecular interactions and cell biology experiments. Beyond the realm of academic research, purified proteins serve as efficient tools in the therapeutic and diagnostic landscape, finding many applications in the pharmaceutical industry. To ensure the reliability of experimental data in these studies, stringent protein quality controls are imperative.

The objective of this course is to familiarize participants with these **guidelines for protein quality control** and to provide an **overview of the technologies** essential for enhancing the accuracy and reproducibility of data obtained with purified proteins.

This course is designed for scientists currently using or intending to use purified proteins in their laboratory experiments. By the end of the course, participants should be familiar with **a variety of techniques applicable to purified proteins**, ultimately enhancing the reliability and reproducibility of data in downstream applications involving these proteins.

Programme

We offer a 4-day course comprising lectures on protein expression and purification techniques, and methods for assessing the quality of purified protein samples. Additionally, participants will have **hands-on practical sessions** demonstrating how to apply these experiments for protein quality control, including with their own samples.

Covered topics will include: overview of protein expression and purification methods; optical properties of proteins; hydrogen-deuterium exchange applications in protein quality control; light scattering and mass photometry; mass spectrometry; storage, formulation and extended tests; differential scanning fluorimetry; protein-protein interactions.

Practical sessions will cover: mass spectrometry; mass photometry; UV absorbance; fluorescence; circular dichroism; DLS; nanoDSF and SEC-MALS.



Faculty

Dr Paloma Fernandez Varela, Laboratoire de Biologie Structurale Servier (LBS3), NovAlix, Strasbourg, France

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Dr Martie C. M. Verschuren, Avans University of Applied Sciences, Research group Analysis Techniques in Life Science, Breda, the Netherlands

Registration

This course is limited to **18 participants**, selected on the basis of a motivation letter, CV and a letter of support from their supervisor. Priority will be given to junior researchers, namely PhD students and postdocs. **Registration deadline May 30th, 2025.**

Registration fees (500 €) include admission, course materials, lunches, coffee breaks and a social dinner. IUPAB-sponsored travel grants available.

More information at <https://www.congressi.unisi.it/icPQC-Siena2025/> or mail to icpqcsiena2025@gmail.com

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