

## Quality control for Biology (QC4Bio)

4<sup>th</sup>-8<sup>th</sup> April 2022

Institut Pasteur, France (Pasteur-PFBMI)

This basic-level training course is aimed at biologists, immunologists, pharmacologists, biochemists, structural biologists, etc., who want to improve their skills in quality control of protein samples, and more specifically on the analysis and optimization of their samples for a variety of downstream applications. The objective is to help warranting more productive, robust and reproducible research by applying quality control pipelines systematically to all purified protein samples.

The course will cover different biochemical and biophysical techniques such as chromatography, dynamic and static light scattering, viscometry, circular dichroism, mass spectrometry, and differential scanning fluorimetry. Hands on training will be provided on basic quality control of purified proteins, as well as on buffer and storage optimization. Trainees will be allowed to bring their own samples to use during the practical sessions. These sessions will be complemented with dry practical tutorials on purification strategies as well as on the choice of molecular-scale biophysical measurements to complement their studies.

*The course will provide* theoretical lectures (16h), dry tutorials (7h), wet practicals (10h) on sample quality assessment and sample optimization. To that avail, the theory and practicalities of different approaches and techniques will be covered, such as:

Soluble protein purification, Membrane protein purification, Multi-protein assembly purification, Capillary Electrophoresis, UV-visible spectrophotometry, Dynamic light scattering, Taylor dispersion, Circular Dichroism, SEC coupled to static light scattering, DSF Thermofluor/nanoDSF, Quality control for biological applications (In vivo experiments, immunology...), Quality control for biophysical applications (AUC, CD, MST, ITC, SPR, BLI, ...), Quality control for structural applications (NMR, SAXS, HDX-MS, crystallography, cryo-EM).

*Other details:* The course is aimed at trainees with little experience, who want to acquire new scientific and technical skills. Registration to the course will be free of charge. Ten travel bursaries of a maximum 400 euros each will be offered to cover travel costs.

Visit the website to find out more and to apply to take part in the course.

<https://www.mosbri.eu/training/basic-level-schools/bls1/>