



**UNIVERSITÀ
DI SIENA**
1240

**International Post-Graduate Course on
Protein Quality Control**

Siena, Italy, June 24-27, 2025



Venue:

Università degli Studi di Siena - Polo Didattico di San Miniato
Via Aldo Moro 2 – I-53100 Siena, Italy



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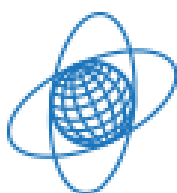
DIPARTIMENTO DI
BIOTECNOLOGIE MEDICHE
— DBM

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)**



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Organized by the **Department of Medical Biotechnologies,**
University of Siena



In collaboration with

Avans University of Applied Sciences, Breda, The Netherlands,

Centre for Protein Engineering, University of Liège, Belgium,

Department of Biotechnology, Chemistry and Pharmacy, University of Siena, Italy

EMBL, Heidelberg, Germany.

Institut Pasteur, Paris, France,

NovAliX, Saclay, France,



PhD of National Interest
Innovation in the diagnosis,
prevention and treatment of infections
at epidemic-pandemic risk



One Health Basic and Translational
Actions Addressing Unmet Needs
on Emerging Infectious Diseases



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With the support of





Faculty

Dr. Paloma Fernandez Varela	Laboratoire de Biologie Structurale Servier Saclay (LBS3), Novalix, Saclay, France
Prof. Gianluca Giorgi	Department of Biotechnology, Chemistry and Pharmacy, University of Siena
Romain Malempré, M.Sc.	Laboratory of Enzymology and Protein Folding, CIP, InBioS, University of Liège, Belgium
Prof. André Matagne	Laboratory of Enzymology and Protein Folding, CIP, InBioS, University of Liège, Belgium
Dr. Bertrand Raynal	Department of Structural Biology, Molecular Biophysics, Institut Pasteur, Paris, France
Dr. Kim Remans	EMBL Protein Expression and Purification Core Facility, European Molecular Biology Laboratory, Heidelberg, Germany
Dr. Marylène Vandevenne	Robotein [®] , Centre for Protein Engineering, InBioS, University of Liège, Belgium
Dr. Martie C. M. Verschuren	Avans University of Applied Sciences, Research group Analysis Techniques in Life Science, Breda, the Netherlands



Tuesday June 24th, 2025

Room 14, Polo Didattico San Miniato

9:00	Arrival and Registration
9:45	Institutional welcome address and general course introduction (Prof. Donata Medaglini , Vice-Rector; Prof. Jean-Denis Docquier , Department of Medical Biotechnologies, University of Siena; Prof. André Matagne)
10:00	Overview of protein expression methods (Dr. Kim Remans)
11:30	Coffee Break
12:00	Mass spectrometry (Prof. Gianluca Giorgi)
13:00	Lunch
14:00	Minimal information on protein identity, expression and purification parameters: an overview of the proposed guidelines and our key learnings (Prof. André Matagne and Dr. Bertrand Raynal)
15:30	<p>Practical session no. 1 (Laboratories LD5 and LD6)</p> <p>Group 1: DLS, nanoDSF and SEC-MALS (Dr. Danilo Friscione, Waters-Wyatt; Dr. Markus Epe, Applied Photophysics; Dr. Marylène Vandevenne)</p> <p>Group 2: Mass spectrometry (Prof. Gianluca Giorgi) and mass photometry (Dr. Perla Vega Dominguez, Refeyn)</p> <p>Group 3: UV absorbance, fluorescence and circular dichroism spectroscopy (Romain Malempré)</p>
18:30	End of day 1
20:00	Welcome Dinner



Wednesday June 25th, 2025

Room 14, Polo Didattico San Miniato

9:30	Overview of protein purification methods (Dr. Kim Remans)
10:30	Polyacrylamide gel electrophoresis (Dr. Martie Verschuren)
11:00	Coffee Break
11:30	Optical spectroscopies: absorbance, fluorescence, circular dichroism (Prof. André Matagne)
13:15	Lunch
14:15	Determination of the protein concentration (methods and pro's and con's) (Dr. Marylène Vandevenne)
15:00	<p>Practical session no. 2 (Laboratories LD5 and LD6)</p> <p>Group 1: Mass spectrometry (Prof. Gianluca Giorgi) and mass photometry (Dr. Perla Vega Dominguez, Refeyn)</p> <p>Group 2: UV absorbance, fluorescence and circular dichroism spectroscopy (Romain Malempré)</p> <p>Group 3: DLS, nanoDSF and SEC-MALS (Dr. Danilo Friscione, Waters-Wyatt; Dr. Markus Epe, Applied Photophysics; Dr. Marylène Vandevenne)</p>
18:00	End of day 2



Thursday June 26th, 2025

Room 14, Polo Didattico San Miniato

9:30	Light scattering (dynamic and static) (Dr. Bertrand Raynal)
10:30	Mass photometry (Dr. Perla Vega Dominguez , Refeyn)
11:15	Coffee Break
11:45	Hydrogen-deuterium exchange applications in protein quality control (Romain Malempré)
13:00	Lunch
14:00	<p>Practical session no. 3 (Laboratories LD5 and LD6)</p> <p>Group 1: UV absorbance, fluorescence and circular dichroism spectroscopy (Romain Malempré)</p> <p>Group 2: DLS, nanoDSF and SEC-MALS (Dr. Danilo Friscione, Waters-Wyatt; Dr. Markus Epe, Applied Photophysics; Dr. Marylène Vandevenne)</p> <p>Group 3: Mass spectrometry (Prof. Gianluca Giorgi) and mass photometry (Dr. Perla Vega Dominguez, Refeyn)</p>
17:00	End of day 3



Friday June 27th, 2025

Room 14, Polo Didattico San Miniato

9:30 Differential scanning fluorimetry (DSF) (Dr. **Paloma Fernandez-Varela**)

10:30 Protein storage and formulation – Part 1 (Dr. **Marylène Vandevenne**)

11:00 Coffee Break

11:30 Protein storage and formulation – Part 2 (Dr. **Marylène Vandevenne**)

12:00 Methods to evaluate protein-protein interactions (Dr. **Paloma Fernandez-Varela**)

13:00 Lunch

14:00 Practical session no. 4 (Room 14)

Debriefing with participants to discuss the results of practical sessions and the overall outcomes of the course (Chair: Dr. **Martie Verschuren**)

- Discussion practical session 1
- Discussion practical session 2
- Discussion practical session 3
- General discussion, feedback and closing remarks

17:00 End of the course