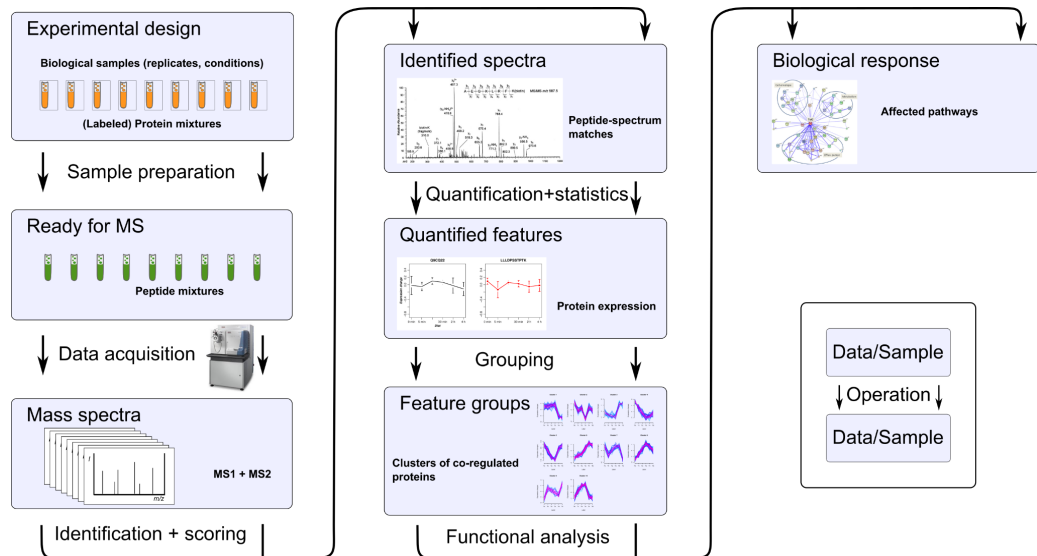


# NordBioMedNet Summer School 2021 (online)

## Computational Proteomics



University of Southern Denmark  
Odense, Denmark

9th - 13th August 2021  
Registration until 1st of July



UNIVERSITETET I BERGEN



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Odense – 2021 is part of the “Open Educational Resources in Computational Biomedicine” (OERCompBiomed) project conducted by *NordBioMed.org* and funded by *Erasmus+*.

NordBioMed is a collaborative network in the field of Biomedicine between the Universities of Turku, Eastern Finland (Kuopio), Bergen, Odense and Karolinska Institutet. The network was originally formed in 2013 to strengthen the individual biomedical teaching programs within the component universities and make them internationally more comparative by providing complementary activities from the partner universities. The network supports both student and teacher mobility, organizes intensive courses and develops a virtual online teaching and information platform on the OpenedX platform, supported by a GitHub repository. The topic for the 2021 Summer school is computational proteomics.

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## Attendance

All presentations but the workshops are open to everyone. Access to the presentations will be given via email. If you did not get any email, please contact [veits@bmb.sdu.dk](mailto:veits@bmb.sdu.dk).

## Confirmed speakers

Adelina Rogowska-Wrzesinska  
Anne-Claude Gingras  
Alexey Nesvizhskii  
Harald Barsnes  
Ileana Rodríguez León  
Karin Hjernø  
Lennart Martens  
Lukas Käll  
Mads Grønborg  
Marc Vaudel  
Marie Locard-Paulet  
Martin Røssel Larsen  
Ole Nørregaard Jensen  
Peter Højrup  
Sylvain Tollis  
Thomas Kofoed  
Veit Schwämmle  
Vladimir Gorshkov

## Summer School Programme

(all times in CEST)

**Monday August 2**

Preparation, discussion of pre-assignments and warm-up  
*Karin Hjernø, Veit Schwämmle*

### **Monday August 9**

- 9:00-9:15 Welcome and introduction to event
- 9:30-11:30 **Advanced Methods in Proteomics 1/2**  
Top-down proteomics and MS imaging  
*Ole N Jensen*  
PTMomics  
*Martin R Larsen*  
Protein oxidations and bioinformatics challenges  
*Adelina Rogowska-Wrzesinska*  
Boosting proteomics with machine learning  
*Vladimir Gorshkov*
- 12:30-13:30 Lunch break
- 13:30-14:00 **Advanced Methods in Proteomics 1/2**  
Protein information in live cells: quantitative bio-imaging  
*Sylvain Tollis*
- 14:30-17:30 **Workshop** Introduction to bioinformatics for proteomics  
*Harald Barsnes*

### **Tuesday August 10**

- 9:00-10:00 Data sharing and/or data reprocessing  
*Lennart Martens*
- 10:30-11:30 **Workshop** QC, pitfalls and reproducibility (1/2)  
*Sylvain Tollis, Veit Schwämmle*
- 11:30-12:30 Lunch break
- 12:30-14:30 **Workshop** QC, pitfalls and reproducibility (2/2)  
*Sylvain Tollis, Veit Schwämmle*
- 15:00-16:00 The BioID-based humancellmap.org and other visualization tools  
*Anne-Claude Gingras*
- 16:00-17:00 Contaminants in Proteomics: CRAPome  
*Alexey Nesvizhskii*

### **Wednesday August 11**

- 9:00-10:00 Quantitative analysis of proteomics data  
*Lukas Käll*

- 10:30-11:30 Quantitative interpretation of proteomics data  
*Veit Schwämmle*
- 11:30-12:30 Lunch break
- 12:30-16:30 **Workshop** Statistical testing, cluster analysis and protein complexes  
*Veit Schwämmle*

### Thursday August 12

- 9:00-11:30 **Proteomics research and industry**  
Reproducible protein identification and quantification  
*Thomas Kofoed (Alphalyse)*  
Proteomics and peptidomics based target discovery  
*Mads Grønborg (Novo Nordisk)*  
Applications of proteomics in industry  
*Ileana R Leon (Ferring)*
- 11:30-12:30 Lunch break
- 12:30-14:00 **Workshop** Simulation of proteomics data  
*Marie Locard-Paulet*
- 14:30-17:00 **Workshop** Proteogenomics  
*Marc Vaudel*
- 17:00-17:30 Coffee table and feedback

### Friday August 13

- 9:00-9:30 Crosslinking and protein structure  
*Peter Højrup*
- 9:30-13:00 Student presentations and summer school bingo

## Virtual environment and Social Activities

Online material will be hosted on GitHub and the Open EdX platform [training.bmb.sdu.dk](https://training.bmb.sdu.dk)

For presentations and interactions during the summer school, a virtual conference environment like AirMeet or Wonder will be used.