**Course program**

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| **30rd of October, Monday (untargeted metabolomics) Meeting room 1** |
| 07:30 Driving from Viborg to Foulum | DanHostel (3 per) + Asmild (Mihai, Zahra and Ece) (total 6 per) | Natalja |
| 08:00 – 08:30 | Introduction to the course program, rapport writing and the people involved  | Natalja |
| 08:30 – 10:00 | Introduction to untargeted metabolomics. Sample preparationUse of internal standards and QC samplesData analyses and processing of data/data clean up | Mette/Mihai |
| 10:00 – 10:30 | Break (coffee/tea and fruits) |  |
| 10:30 – 12:00 | PCA and statistical validation of the data | Achim (Norwigian University of life science) statistician |
| 12:00 – 13:00 | Break (lunch) |  |
| 13:00 – 15:00 | Sample preparation (urine) and introduction to QTof instrument in the laboratory | Mette/Natalja/Mihai/Kasper |
| 15:00 – 15:30 | Break (coffee/tea and cake) |  |
| 15:30 – 16:30 | Further sample preparation (urine) and introduction to QTof instrument in the laboratory/work on individual samples | Mette/Natalja/Mihai |
| 16:30 – 18:00 | Work on individual questions /samples | Mette/Natalja/Mihai |
| 18:00 – 19:00 | Dinner (paid by the course) |  |
| 19:00 | Driving to Viborg | Mette |
|  | Samples run during the night |  |
| **31st of October, Tuesday (untargeted metabolomics)** | **Meeting room 1** |  |
| 07:30 Driving from Viborg to Foulum | DanHostel (3 per) + Asmild (Mihai, Zahra and Ece) (total 6 per) | Mette |
| 08:00 – 18:00 | Data processing and analyses (PCA)/Introduction to software | Mette/Natalja/Mihai/Achim |
| 10:00 – 10:30 | Break (coffee/tea and fruits) |  |
| 12:00 – 13:00 | Break (lunch) |  |
| 15:00 – 15:30 | Break (coffee/tea and cake) |  |
| 18:00 – 19:00 | Dinner (paid by the course) |  |
| 19:00 | Driving to Viborg | Natalja |
| **1st of November, Wednesday (untargeted and targeted metabolomics)** | **Meeting room 1** |  |
| 07:30 Driving from Viborg to Foulum | DanHostel (3 per) + Asmild (Mihai, Zahra and Ece) (total 6 per) | Natalja |
| 08:00 – 12:00 | Metabolite identification (laboratory) | Mette/Mihai/Kasper |
| 10:00 – 10:30 | Break (coffee/tea and fruits) |  |
| 12:00 – 13:00 | Break (lunch) |  |
| 13:00 – 14:00 | Installation of Analyst | Natalja/Lars |
| 14:00 – 15:00 | Introduction to targeted metabolomicsMethod development Method validationUse of standards and QC samples | Natalja |
| 15:00 – 15:30 | Break (coffee/tea and cake) |  |
| 15:30 – 16:30 | Introduction to the methods that will be used in the laboratory | Natalja |
| 16:30 – 18:00 | Sample preparation in the laboratory (hydrolyses of samples) | Natalja |
| 18:00 – 19:00 | Dinner (paid by the course) |  |
| 19:00 Driving to Viborg |  | Natalja |
| **2nd of November, Thursday (targeted metabolomics)** | **D 23 room 3292** |  |
| 07:30 Driving from Viborg to Foulum | DanHostel (3 per) + Asmild (Mihai, Zahra and Ece) (total 6 per) | Natalja |
| 08:00 – 16:30 | Sample preparation (plasma and urine) and optimization on QTrap instrument in the laboratory | Natalja/Kasper/Birgit |
| 10:00 – 10:30 | Break (coffee/tea and fruits) |  |
| 12:00 – 13:00 | Break (lunch) |  |
| 15:00 – 15:30 | Break (coffee/tea and cake) |  |
| 15:30 – 16:30 | Demonstration of FIA | Natalja |
| 16:30 – 18:00 | Work on individual questions/samples | Natalja/Mihai/Mette |
| 18:00 – 19:00 | Dinner (paid by the course) |  |
| 19:00 Driving to Viborg |  | Mette |
|  | Samples run during the night |  |
| **3rd of November, Friday (targeted metabolomics and summary)** | **Meeting room 1** |  |
| 07:30 Driving from Viborg to Foulum | DanHostel (3 per) + Asmild (Mihai, Zahra and Ece) (total 6 per) | Mette |
| 08:00 – 12:00 | Data collection and quantification, Analyst software | Natalja |
| 10:00 – 10:30 | Break (coffee/tea and fruits) |  |
| 12:00 – 13:00 | Break (lunch) |  |
| 13:00 – 15:00 | Summary (combination of untargeted and targeted metabolomics) | Natalja/Mette |
| 15:00 – 15:30 | Validation of the course (coffee/tea and cake) | Natalja/Mette |
| 15:30  | End of the course |  |
| **Rapport deadline the 26th of November** |  |  |