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| July 2014 |  | Mon 7 | | | Tue 8 | | Wen 9 | Thu 10 | | Fri 11 | |
| Morning session  9:00  13:00 | 9:00 |  | | | Gel Staining (RW) | | *A+B - Practical:*  *2D PAGE with Serva HPE™ Tower and materials* | The uses of electrophoresis in biological discovery (PJ) | |  | |
| 10:00 | Troubleshooting (RW) | | MS basics (PJ) | |
| 10:45 | Welcome and introduction | | | Coffee break | | Coffee break | Coffee break | | *A: Spot cutting* |  |
| 11:15 | Gel-based Proteomics:  an overview of the basic techniques (RW) | | | Statistical Analysis (PJ) | | 2D gel study examples (RW) | Protein Fingerprinting (PJ) | | *A: Target spotting* | *B: Spot cutting* |
| Isoelectric focusing and IPG; 2D PAGE basics (RW) | | | Experimental design (PJ) | | Image analysis DIGE and non-DIGE (MK) | Peptide Fingerprinting (PJ) | | *A: MALDI/MS* | *B: Target spotting* |
| 12:45 | Questions and discussion | | | Questions and discussion | | Questions and discussion | Questions and discussion | |  | *B: MALDI/MS* |
| Lunch | 13:00 | Lunch | | | Lunch | | Lunch | Lunch | | Lunch | |
| Afternoon  session  14:00 18:30 | 14:00 | Sample preparation (RW) | | | *A+B*  *Start of 1st dimension* | | *A+B*  *Strip equilibration and start of 2nd dimension* | *A+B*  *End of 2nd dimension* | | *A: MS/MS instruments* | *B:*  *Case studies from the lab* |
| *A: MS/MS identification* | *B: MS/MS instruments* |
| 15:00 | *A*  *Disruption methods and protein extraction* | *B*  *Sample cleanup Protein conc. determination* | | *A*  *Multicaster assembly* | *B*  *Western blotting* | *A+B*  *Practical:*  *2D PAGE with Serva HPE™ Tower and materials* | *A+B*  *Typhoon scanning of DIGE gels* | | *A:*  *Case studies from the lab* | *B:*  *MS/MS identification* |
| 15:30 | *A*  *Sample cleanup Protein conc. determination* | *B*  *Disruption methods and protein extraction* | | *A*  *Western blotting* | *B*  *Multicaster assembly* | *A+B*  *Cassette opening and gel handling for staining* | | End of course | |
| 16:00 | Coffee break | | | Coffee break | | Coffee break | Free Time | |  | |
| 16:30 | *A+B*  *DIGE labeling*  *Strip rehydration* | | | *A+B*  *Gradient gel casting* | | 2D Software Hands-on  (MK) |
|  | 18:00 |  | | |  | |  |
|  | 20:00 |  | | |  | |  | Social Dinner in Alghero | |
| Students will be divided into groups (A and B) for practical activities | | | | | | | | | | | |
| Blue: Theoretical classes | | | | Pink: Electrophoresis practical | | | Green: MS practical | | Yellow: breaks and social activities | | |

Lecturers: Peter James (PJ); Reiner Westermeier (RW); Markus Kolbe (MK).