

NERC-MDIBL Environmental Genomics and Metabolomics

5-10 March 2017

Nicholson Building, University of Birmingham, UK

Course Programme*

*Please note this is a provisional course programme and the times of some events may change

| Date | Time | Event |
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| Sunday | 4.00-5.00 | Registration |
| | 5.00-6.00 | Plenary lecture |
| | 6.00-7.00 | Welcome reception |
| Monday | 8.30-9.00 | Registration |
| | Combined Track | |
| | 9.00-9.45 | Lecture: Introduction to Environmental Genomics |
| | 9.45-10.30 | Lecture: Introduction to Environmental Metabolomics |
| | 10.30-10.45 | Coffee Break |
| | 10.45-11.45 | Lecture: The challenges of working with big data and performing multi-omics studies |
| | 11.45-12.00 | Attendees logon to wireless network and computer server |
| | 12.00-13.00 | Lunch |
| | 13.00-13.45 | Ice-breaker session |
| | Genomics Track | |
| | Metabolomics Track | |
| | 13.45-14.00 | Introduction to genomics track |
| | 14.00-15.00 | Workshop Presentation: Library construction methods and QC |
| | 15.00-15.55 | Workshop Presentation: Introduction to automation systems |
| | 15.55-16.05 | Coffee Break |
| | 16.05-17.00 | Workshop Presentation: Introduction to the sequence data workflow |
| | 19.00-20.00 | Evening Lecture |
| Tuesday | Genomics Track | |
| | 9.00-10.00 | Bioinformatics Training: Introduction to R |
| | 10.00-10.45 | Bioinformatics Training: Visualising of sequence data for quality |
| | 10.45-11.00 | Coffee break |
| | 11.00-12.00 | Bioinformatics Training: Visualising of sequence data for quality (Continued) |
| | 12.00-13.00 | Lunch |
| | Genomics Track | |
| | Metabolomics Track | |
| | 9.00-10.00 | Workshop Presentation: Analytical technologies – mass spectrometry |
| | 10.00-11.00 | Workshop Presentation: Analytical technologies – NMR |
| | 10.00-10.45 | Synthesis session: Working with NBAF and how to obtain funding for your project |
| | 11.00-12.00 | Guest Presentation |
| | Metabolomics Track | |
| | Genomics Track | |

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| | 13.00-14.15 | Workshop presentation: Review of the sequencing technology, it’s strengths and weaknesses | 13.00-14.55 | Group 1 | Group 2 |
| | 14.15-15.55 | Bioinformatics Training: Visualizing complex data | | Laboratory Session: Hands-on sample preparation | Synthesis session: Experimental design |
| | 15.55-16.05 | Coffee Break | 14.55-15.05 | Coffee Break | |
| | 16.05-17.00 | Bioinformatics Training: Navigating the command line and more advanced R | 15.05-17.00 | Synthesis session: Experimental design | Laboratory Session: Hands-on sample preparation |
| | 19.00-20.00 | Evening Lecture (Lecture Theatre NG08, Biosciences Building) | | | |
| | Wednesday | Genomics Track | | Metabolomics Track | |
| 9.00-10.45 | | Bioinformatics Training: Data analysis using R (Part 1) | 9.00-10.30 | Workshop Presentation: Data processing | |
| 10.45-11.00 | | Coffee Break | 10.30-10.45 | Coffee Break | |
| 11.00-12.00 | | Bioinformatics Training: Data analysis using R (Part 2) | 10.45-12.00 | Workshop Presentation: Introduction to Matlab | |
| 12.00-13.00 | | Lunch | | | |
| 13.00-14.30 | | Workshop presentation: Computational tools to study genetic diversity in natural populations | 13.00-13.45 | Workshop Presentation: Hands-on data analysis | |
| 14.30-15.30 | | Bioinformatics Training: Data analysis using R (Part 3) | 13.45-14.45 | Computer Workshop: Data analysis I | |
| | | | 14.45-15.30 | Workshop Presentation: Data analysis II | |
| 15.30-17.00 | | Tour: Genomics and Metabolomics Facilities | | | |
| 18.00-19.00 | | Pizza and Networking | | | |
| 19.00-20.00 | Evening Lecture | | | | |
| Thursday | | Genomics Track | Metabolomics Track | | |
| | 9.00-10.45 | Bioinformatics Training: Gene set enrichment | 9.00-9.30 | Workshop Presentation: Data analysis III | |
| | | | 9.30-12.00 | Computer Workshop: Hands-on data analysis | |
| | 10.45-11.00 | Coffee Break | | | |
| | 11.00-12.00 | Bioinformatics Training: Pathways analysis | 11.00-12.00 | Computer Workshop: Hands-on data analysis | |
| | 12.00-13.00 | Lunch | | | |
| | 13.00-15.25 | Bioinformatics Training: Exploring genome sequence variation | 13.00-14.00 | Guest Presentation | |
| | | | 14.00-14.40 | Workshop Presentation: Metabolite identification and databases | |
| | 15.25-15.35 | Coffee Break | 14.40-15.05 | Workshop Presentation: Metabolomics standards initiative, reporting your results and using MetaboLights | |
| | 15.35-17.00 | Synthesis session: “Why not use _____ as my model species?” | 15.05-15.15 | Coffee Break | |
| | | | 15.15-16.30 | Computer Workshop: Hands-on metabolite identification | |
| | | | 16.30-17.00 | Synthesis session: Review of data collected during laboratory session | |
| | 19.00-20.00 | Evening Lecture | | | |
| Friday | Combined Track | | | | |
| | 9.00-12.00 | Synthesis session: Designing multi-omics studies. | | | |
| | 12.00-13.00 | Lunch | | | |

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| | 13.00-14.00 | Synthesis session: How do I obtain grant funding for my project?, |
| | 14.00-14.30 | Question and answer session, UoB & Guest Faculty |
| | 14.30-15.00 | Closing ceremony |
| | 15.00-16.00 | Optional bioinformatics help session: |