

# 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		
Sunday	4.00-5.00	<b>Registration</b>		
	5.00-6.00	<b>Plenary lecture</b>		
	6.00-7.00	<b>Welcome reception</b>		
Monday	8.30-9.00	<b>Registration</b>		
		<b>Combined Track</b>		
	9.00-9.45	<b>Lecture:</b> Introduction to Environmental Genomics		
	9.45-10.30	<b>Lecture:</b> Introduction to Environmental Metabolomics		
	10.30-10.45	<b>Coffee Break</b>		
	10.45-11.45	<b>Lecture:</b> 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	<b>Lunch</b>		
	13.00-13.45	<b>Ice-breaker session</b>		
		<b>Genomics Track</b>		<b>Metabolomics Track</b>
	13.45-14.00	<b>Introduction to genomics track</b>	13.45-14.00	<b>Introduction to metabolomics track</b>
	14.00-15.00	<b>Workshop Presentation:</b> Library construction methods and QC	14.00-15.00	<b>Workshop Presentation:</b> Experimental design in environmental metabolomics
	15.00-15.55	<b>Workshop Presentation:</b> Introduction to automation systems	15.00-15.50	<b>Workshop Presentation:</b> Quality assurance and quality control
	15.55-16.05	<b>Coffee Break</b>	15.50-16.00	<b>Coffee Break</b>
	16.05-17.00	<b>Workshop Presentation:</b> Introduction to the sequence data workflow	16.00-17.00	<b>Workshop Presentation:</b> Sample preparation in metabolomics
	19.00-20.00	<b>Evening Lecture</b>		
		<b>Genomics Track</b>		<b>Metabolomics Track</b>
	9.00-10.00	<b>Bioinformatics Training:</b> Introduction to R	9.00-10.00	<b>Workshop Presentation:</b> Analytical technologies – mass spectrometry
	10.00-10.45		10.00-11.00	<b>Workshop Presentation:</b> Analytical technologies – NMR
	10.45-11.00	<b>Coffee break</b>		
	11.00-12.00	<b>Bioinformatics Training:</b> Visualising of sequence data for quality (Continued)	11.00-12.00	<b>Guest Presentation</b>
	12.00-13.00	<b>Lunch</b>		
		<b>Genomics Track</b>		<b>Metabolomics Track</b>

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

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