

## Metabolomics with the Q Exactive

### Course Programme

Date	Time	Session	
Day 1	09.00 – 09.15	Registration	
	09.15 – 09.30	<b>Lecture: Introduction to the course and Birmingham Metabolomics Training Centre</b> <i>Dr Cate Winder</i>	
	09.30 – 10.15	<b>Lecture: Introduction to Metabolomics in Mass Spectrometry</b> <i>Professor Warwick Dunn</i>	
	10.15 – 11.00	<b>Lecture: The Importance of Experimental Design with Case Studies</b> <i>Professor Warwick Dunn</i>	
	11.00 – 11.15	Break	
	11.15 – 12.00	<b>Lecture: Liquid Chromatography, Mass Spectrometry and the Q Exactive Mass Spectrometer</b> <i>Professor Warwick Dunn</i>	
	12.00 – 12.45	<b>Lecture: Sample Preparation in Metabolomics</b> <i>Dr Cate Winder</i>	
	12.45 – 13.30	Lunch	
	13.30 – 15.30	<u>Group 1</u> : Lab session : Sample preparation (tissue, biphasic extractions) <i>Dr Lukáš Najdekr</i>	<u>Group 2</u> : Lab session : UHPLC-MS analysis setup and calibration <i>Dr Cate Winder</i>
		Break	
	15.30 – 15.45	<u>Group 1</u> : Lab session : UHPLC-MS analysis setup and calibration <i>Dr Cate Winder</i>	<u>Group 2</u> : Lab session : Sample preparation (tissue, biphasic extractions) <i>Dr Lukáš Najdekr</i>
		15.45 – 17.45	

Day 2	09.00 – 10.30	<b>Group 1 : Lab session : Sample preparation (biofluids, monophasic extractions and QC preparation)</b> <i>Dr Lukáš Najdekr</i>	<b>Group 2 : Lab session: Sample reconstitution and UHPLC-MS analysis of profiling samples including QC set-up</b> <i>Dr Cate Winder</i>
	10.30 – 10.45	Break	
	10.45 – 12.15	<b>Group 1 : Lab session: Sample reconstitution and UHPLC-MS analysis of profiling samples including QC set-up</b> <i>Dr Cate Winder</i>	<b>Group 2 : Lab session : Sample preparation (biofluids, monophasic extractions and QC preparation)</b> <i>Dr Lukáš Najdekr</i>
	12.15 – 13.00	Lunch	
	13.00 – 14.30	<b>Lab session : Targeted set up on the Q Exactive</b> <i>Dr Cate Winder</i>	
	14.30 – 15.15	<b>Lab session : MS/MS data dependent analysis</b> <i>Dr Cate Winder</i>	
	15.15 – 15.30	Break	
	15.30 – 17.30	<b>Computer Workshop : Data processing with Compound Discoverer</b> <i>Dr Lukáš Najdekr</i>	
Day 3	09.00 – 09.45	<b>Lecture: Data Analysis in Metabolomics</b> <i>Dr Ralf Weber</i>	
	09.45 – 10.30	<b>Computer Workshop : Data Analysis in Metabolomics</b> <i>Dr Ralf Weber</i>	
	10.30 – 10.45	Break	
	10.45 – 12.00	<b>Computer Workshop : Data Analysis in Metabolomics</b> <i>Dr Ralf Weber</i>	
	12.00 – 12.30	Lunch	
	12.30 – 13.15	<b>Lecture: Introduction to Metabolite Annotation and Identification</b> <i>Professor Warwick Dunn</i>	
	13.15 – 14.45	<b>Computer Workshop : Metabolite Identification Pipeline</b> <i>Professor Warwick Dunn</i>	
	14.45 – 15.30	<b>Q&amp;A : Tips and tricks from the experts and question session</b> <i>Professor Warwick Dunn, Dr Cate Winder</i>	
	15.30 – 15.45	<b>Feedback survey</b> <i>Mr David Epps</i>	