

College of Medical, Veterinary & Life Sciences

An Introduction to Omics

Two-day training course

A two-day course aimed at familiarizing participants with the basis and application of various omics disciplines: genomics, transcriptomics, metabolomics, proteomics, and bioinformatics. Each of the omics disciplines will be covered by a lecture and a practical bioinformatics session. By the end of the course users should understand, for each omics level: the basis of the discipline, the instrumentation used to generate high-throughput biological data, key applications, and how to visualise the resulting data using commonly used software packages. Participants will also be aware of how different large-scale data sets can be integrated in order to obtain better biological inference, and appreciate the nature of other modern challenges in bioinformatics.

Dates

3rd – 4th December 2015

Time

Day 1: 0930 – 1645

Day 2: 0900 – 1645

Course fee

£320

Target group

Research students and staff who wish to deepen their understanding of high-throughput data generation and analysis.

Venue

West Medical Building,
Computer Cluster 515

Speakers

Michael Barrett, Graham Hamilton,
Pawel Herzyk, Naomi Rankin,
Yoann Gloaguen, Gavin Blackburn,
Stefan Weidt and Fiona Achcar

Registration and enquiriesContact: polyomics@glasgow.ac.uk**Further information**Online at: www.polyomics.gla.ac.uk/

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Programme Day 1**West Medical Building,
Computer Cluster 515**

Overview of Polyomics (Michael Barrett)
0930 – 1000

**Genomics (Graham Hamilton):
Lecture**
1000 – 1045 Genomics

Tea/Coffee break (in Courtyard)
1045 – 1100

**Genomics (Graham Hamilton):
Practical session**
1100 – 1230

Lunch (in Courtyard)
1230 – 1330

**Transcriptomics (Pawel Herzyk):
Lecture**
1330 – 1415

**Transcriptomics (Pawel Herzyk):
Practical session**
1415 – 1515

Tea/Coffee break (in Courtyard)
1515 – 1530

**Transcriptomics (Pawel Herzyk):
Practical session cont'd**
1530 – 1600

**Statistical Challenges in Omics Data
Analysis (Rónán Daly): Lecture**
1600 – 1645

Programme Day 2

**Introduction to Mass Spectrometry
(Stefan Weidt): Lecture**
0900 – 0945

**LC-MS and GC-MS based Metabolomics
(Gavin Blackburn): Lecture**
0945 – 1030

Tea/Coffee break (in Courtyard)
1030 – 1045

**Metabolomics (Yoann Gloaguen and Gavin
Blackburn): Practical session**
1045 – 1200

**NMR-based Metabolomics (Naomi Rankin):
Lecture**
1200 – 1245

Lunch (in Courtyard)
1245 – 1345

**Proteomics (Richard Burchmore):
Lecture**
1345 – 1430

**Proteomics (Richard Burchmore):
Practical session**
1430 – 1545

Tea/Coffee break (in Courtyard)
1545 – 1600

**Omics and Modelling
(Fiona Achcar): Lecture**
1600 – 1645

