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**EASTBIO DTP Foundation Masterclasses 2018-2019**

**Genomic Approaches**

**Masterclass leader**: Professor Mick Watson (The Roslin Institute, University of Edinburgh)

**Date**: 8 March 2019, 10:15-15:30

**Venue**: TBC, Dundee (*map link*)

**Schedule:**

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| 10:15-10:30 | *Arrival and coffee/tea* |
| 10:30-11:00 | Introduction, background and sequencing technologies |
| 11:00-11:30 | Genome re-sequencing and variant-calling |
| 11:30-12:15 | *Lunch & coffee/tea* |
| 12:15-12:45 | RNA-Seq and other functional genomics  |
| 12:45-13:15 | Genome assembly and contaminant identification |
| 13:15-13:45 | Metagenomics |
| 13:45-14:15 | *Coffee/tea* |
| 14:15-14:45 | Bioinformatics, open science, programming, Bio\* projects |
| 14:45-15:30 | Panel session Q&A & close |

**Summary:**

The aim of this masterclass is to introduce the students to the concepts involved in genomics, including sequencing technologies and large-scale data analysis. The masterclass will be run by a group of young, enthusiastic and practicing researchers from Scotland who have huge experience in analysing large genomic datasets.

On completion of the course, the students will be able to:

* Discuss the pros and cons of current sequencing technologies
* Understand the concepts and methods behind:
	+ Genome re-sequencing and variant calling
	+ RNA-Seq and functional genomics
	+ Genome assembly and contamination
	+ Metagenomics and the microbiome
	+ Bioinformatics software development and open source projects

**Requirements**: Enthusiasm

For further questions, please email enquiries@eastscotbiodtp.ac.uk.