

RNA-Seq Data Analysis

26th – 27th September 2018

Organised by
WHG Bioinformatics Core

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Course Tutors



Helen Lockstone



Santiago Revale

Many combined years experience with sequencing data and particularly transcriptomics – we and the rest of the team can assist WHG researchers in a variety of ways

Bioinformatics Core Group

<http://www.well.ox.ac.uk/bioinformatics-statistical-genetics>



Eshita Sharma



Ben Wright

Course Format & Housekeeping

- 2-day course with mixture of theory and practical sessions – informal and interactive, so please ask questions
- High interest within WHG and beyond – 2 internal runs with >30 attendees in total, running for Medical Sciences Division (20 spaces) in November
- Good opportunity to initiate new interactions between researchers and Bioinformatics Core team – tell us about what you are working on!
- Tea/coffee arriving at 11am, lunch break ~12.45-13.30
- Fire alarm test also due at 11am, any other time please heed it!

- Introducing RNA-Seq as a technique, steps and tools for processing and analysing the data, important considerations for experimental design and dealing with the resulting data
- Provide orientation and context to techniques, tools and developments in this diverse field
- Strong focus on practical aspects of dealing with data generated by an RNA-Seq experiment
 - Alignment and data formats
 - Checking data quality and characteristics
 - Understand how to use analysis packages appropriately

What will you gain?

- Depending on background, it may be a lot of new information to take in
 - Extract the broader messages of each session, rather than all the details
 - Remember Bioinformatics Core can run any or all of the steps for you and help you get to the biological interpretation stage
 - Often helpful for us to do the early processing steps which are computationally intensive (once data processed to gene counts, can analyse using R on a laptop)
- Some may be keen to develop bioinformatics/computational biology skills, perhaps as part of DPhil or for new career opportunities
 - Many benefits of knowing how to handle and analyse large-scale data; skills in high demand
 - Be aware that is a considerable investment of time and effort if coming from non-computational background
- For those who are bioinformaticians themselves, gaining further knowledge and ability to analyse a new type of data