

Omic data analysis and visualisation using R

6 consecutive Mondays format. The 6th day is optional.

Session	Time	Type	Topic
1	9:30 – 10:30	Lecture	What is bioinformatics and what is R?
	10:30 – 12:30	Tutorial	Introduction to R and R studio
	14:00 – 15:00	Lecture	Sequencing and alignment
	15:00 – 17:00	Tutorial	Handling tables in R (part 1)
2	9:30 – 10:30	Lecture	Types of omic table
	10:30 – 12:30	Tutorial	Handling tables in R (part 2)
	14:00 – 15:00	Lecture	Differential data, fold change, and adjusted p
	15:00 – 17:00	Tutorial	Handling tables in R (part 3)
3	9:30 – 10:30	Lecture	Making plots in R using GG-plots
	10:30 – 12:30	Tutorial	Volcano and MA plots
	14:00 – 15:00	Lecture	Making beautiful GG-plots in R
	15:00 – 17:00	Tutorial	Volcano and MA plots revisited
4	9:30 – 10:30	Lecture	Expression density and PCA
	10:30 – 12:30	Tutorial	Expression density and PCA in R, facets
	14:00 – 15:00	Lecture	Box, Violin and Jitter Plots
	15:00 – 17:00	Tutorial	Box, Violin and Jitter Plots in R
5	9:30 – 10:30	Lecture	Heatmaps and Clustering
	10:30 – 12:30	Tutorial	Heatmaps and Clustering in R
	14:00 – 15:00	Lecture	Pathway analysis (part 1)
	15:00 – 17:00	Tutorial	Pathway analysis in R (part 1)
6	9:30 – 10:30	Lecture	Pathway analysis (part 2)
	10:30 – 12:30	Tutorial	Pathway analysis in R (part 2)
	14:00 – 15:00	Lecture	When to stop
	15:00 – 17:00	Tutorial	Reusing your code on a different dataset

More information at: www.immunology.org/training/bioinformatics-training.