

1 Fungal Pathogen Genomics 9 – 13 May 2023 course timetable

Tuesday 9th May

Time (BST)	Content	Instructors/Speaker
10:00 – 10:30	Registration	
10:30 – 12:30	Welcome, and Instructor/Database introductions Wellcome Genome Science Ensembl Fungi SGD/CGD MycoCosm/JGI FungiDB	Martin Aslett Aleena Mushtaq + Manuel Carbajo Jodi Lew-Smith Sara Calhoun D Roos & E Basenko
12:30 –	1. Introduction to database queries FungiDB site search & advanced search strategies SGD YeastMine Ensembl Fungi - BioMart & Molecular Interactions	All instructors
13:00 – 14:00	Lunch	
– 15:30	Introduction to database queries, Cont/...	All instructors
15:30 –	2. Transcriptomics & Proteomics Ensembl Fungi Track Hubs SGD Expression tools - SPELL FungiDB Transcriptomic & Proteomic analysis Assessing (& editing) gene annotation (JBrowse/Apollo)	All instructors D Roos
16:00 – 16:30	Tea break	
– 18:30	Transcriptomics & Proteomics, cont	All instructors
18:30 – 19:00	3. SNPs & Variants SGD Variant viewer FungiDB SNP analysis & CNVs Exploring variant in Ensembl Fungi	All instructors
19:00– 20:00	Welcome reception & Dinner	
20:00 – 21:00	Participant presentations (2 min flash talks)	All instructors

Wednesday 10th May 2023

Time (BST)	Content	Instructors/Speaker
– 09:00	Breakfast	
09:00 – 10:30	SNPs & Variants (Cont.)	All instructors
10:30 – 11:00	Tea break	
11:00 – 13:00	4. Comparative Genomics & Orthology and Evolutionary analysis & cross-species inference Ensembl Fungi – WGA MycoCosm CAZy enzymes MycoCosm Synteny Exploring protein domains and clusters across Ensembl & MycoCosm SGD predicting fungal biology Ensembl Fungi Evolutionary analysis (gene trees) FungiDB JBrowse synteny, orthology & phylogeny	15 min intro: D Roos
13:00 – 14:00	Lunch	
14:00 –	Comparative Genomics & Orthology, Cont/...	All instructors
16:00– 16:30	Tea break	
– 17:00	Comparative Genomics & Orthology, Cont/...	All instructors
17:00 – 19:00	5. NGS data analysis I (<i>note: RNA-Seq and Variant calling sessions are run in parallel</i>) Background & Intro to VEuPathDB Galaxy Deploying workflows using pre-loaded data	Intro lecture - Crouch RNA-Seq SNP calling Galaxy platform & user workspaces 5a. RNA-Seq: Crouch / Basenko 5b. SNP Calling: Roos / Brown
19:00– 20:00	Dinner	
20:00 – 21:00	Research Seminar (Michael Bromley, MRC)	

Thursday 11th May 2023

Time (BST)	Content	Instructors/Speaker
– 09:00	Breakfast	
09:00 –	6. Enrichment analysis SGD GO Slim mapper CGD GO Term finder FungiDB GO enrichment	10 min intro: S Brown
10:30 – 11:00	Tea break	
– 12:30	Enrichment analysis, Cont/...	All instructors
12:30 –	7. NGS Data analysis II RNA-Seq and Variant calling sessions are run in parallel.	Lecture: K. Crouch 7a. RNA-Seq: K.Crouch & E. Basenko 7b. SNP Calling: D.Roos & S. Brown
13:00 – 14:00	Lunch	
14:00 – 15:00	Sanger Tour	Nishadi De Silva
15:00 –	NGS Data analysis II, Cont/... RNA-Seq and Variant calling sessions are run in parallel.	All instructors RNA-Seq facilitator: Crouch / Basenko SNP Calling facilitator: Roos / Brown
16:00– 16:30	Tea break	
– 18:30	NGS Data analysis II, Cont/... RNA-Seq and Variant calling sessions are run in parallel.	All instructors RNA-Seq facilitators: Crouch / Basenko SNP Calling facilitators: Roos / Brown
18:30 – 19:00	Introduction to group projects	Nishadi De Silva
19:00– 20:00	Dinner	
20:00 – 21:00	Research Seminar (Ester Gaya, KEW)	

Friday 12th May 2023

Time (BST)	Content	Instructors/Speaker
– 09:00	Breakfast	
09:00 –	8. Functional analysis: Pathways & metabolites MycoCosm KEGG Browser & Secondary metabolism clusters FungiDB pathways & metabolites	All instructors
10:30 – 11:00	Tea break	
– 12:00	Functional analysis: Pathways & metabolites, Cont/...	All instructors
12:00 –	Group Projects	Nishadi De Silva & All instructors
13:00 – 14:00	Lunch	
14:00 –	Group Projects, Cont/...	
16:00– 16:30	Tea break	
– 19:00	Group Projects, Cont/...	All instructors
19:00– 20:00	Dinner	

Saturday 13th May 2023

Time (BST)	Content	Instructors/Speaker
– 09:00	Breakfast	
09:00 –	Group Projects, Cont/...	All instructors
10:30 – 11:00	Tea break	
11:00 – 13:00	Group Projects Presentations (12 min/team max)	All instructors
13:00 – 14:00	Lunch & Departure	