Short Course in Bioinformatics

17th – 19th March 2025

AGENDA

March 17th 2025

Time	Duration	Topic	Speaker
10h00	15'	Welcoming session	Pedro Leão
10h15	45'	Introduction to Bioinformatics in Natural Products Discovery	Adriana Rego
11h00	30'	NLP/AI for Functional Annotation of Enzymes: A Case Study with FAALPred	Leandro Pereira
11h30	30'	**Coffee-break**	
12h00	30'	Introduction to antiSMASH and BiG-SCAPE workflows	Catarina Loureiro
12h30 **Lunch break**			
14h00	60'+30'	Hands- on session antiSMASH and BiG-SCAPE	Catarina Loureiro
15h30	30'	**Coffee-break**	
16h00	30' + 60	Introduction to GNPs and MicrobeMASST Hands-on session - MicrobeMASST	Mauricio Caraballo

March 18th 2025

Time	Duration	Topic	Speaker
9h00	60'+30'	Phylogenetic approaches to natural product discovery (short) Hands-on session NaPDos2	Hans Singh
10h30	30'	**Coffee-break**	
11h00	30'+45'	Genomic context of target biosynthetic genes (short) Hands-on session genomic context	Adriana Rego Adriana Rego and Catarina Loureiro
12h15		Lunch break	
13h45	45+60'	Introduction to computational protein structure prediction Hands-on session to computational protein structure prediction, molecular docking	Arménio Barbosa
15h30		**Coffee-break**	
15h45	30′	EFI-SSN and Sequence-Based Functional Prediction in Enzyme Discovery	Raquel Castelo Branco

March19th 2025

Time	Duration	Topic	Speaker
10h	15'	Welcoming session – Presentation of the speakers	
10h15	30'	*Open-science-driven development of genome mining tools and their application on microbiomes*	Catarina Loureiro
10h45	15'	Q&A	
11h00	30'	**Coffee-break**	
11h30	45'	*Advancing Biotechnology with Molecular Modeling: Applications in Drug Discovery, Protein Purification and Self-Assembly*	Arménio Barbosa
12h15	15'	Q&A	
12h30		**Lunch break**	
14h30	45'	*Targeted gene cluster mining with GATOR-GC*	Marc G. Chevrette
15H15	15'	Q&A	
15h30	30'	**Coffee-break**	
16h00	45'	*A journey for the discovery of microbial molecules, the need of reference datasets, and using small molecules to understand symbiotic relationships in ants' ecosystems*	Mauricio Caraballo
16H45	15'	Q&A	
17h00	10'	Final remarks	