

Functional annotation and comparative genomics

Objectives:

- understand how to predict protein functions
- learn how to perform typical -omics data analyses to identify candidate genes for further functional analyses
- think critically about results obtained with bioinformatics tools
- find relevant information yourself

Functional annotation and comparative genomics

https://github.com/JeromeCollemare/Microbial_Genomics_course_24day*_instructions/

assignments, command lines and answers

Server B-MBIMIGE2024 ~/data/fungalgenomics_jc/day*

folders contain materials you need for the assignments

Assignments will be shared at the beginning of each session on Blackboard

Command lines of the exercises will be shared before the end of the session

Results of the exercises will be shared just before the wrap-up sessions

Microbial genomics - Functional annotation – Day 1

1. 9h-9h45 Introduction about fungal genomic research and functional annotation
2. Exercise 1: annotation using similarity search
3. Exercise 2: search for conserved domains
4. Exercise 3: search for conserved motifs
5. 15h15-16h Wrap-up session

Microbial genomics - Functional annotation – Day 2

1. 9h-9h30 Introduction about the biology of fungal plant pathogens
2. Exercise 1: orthologous protein families
3. Exercise 2: compare the gene content between different species
4. 11h15-11h45 Wrap-up session
5. Exercise 3: case study with expression data
6. Exercise 4: case study with secondary metabolite gene clusters
7. 15h15-16h Wrap-up session
8. Questions