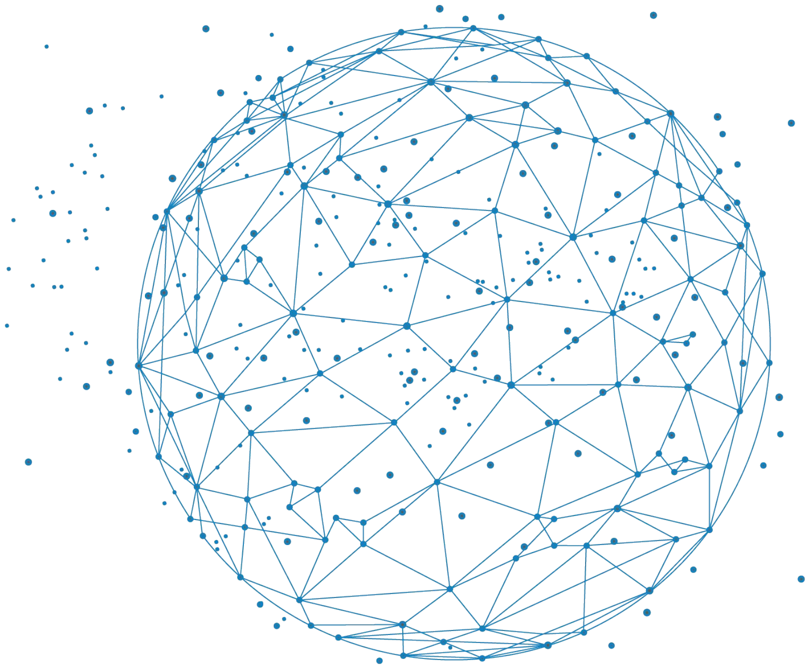
FAIR Bioinfo 2024 - Strasbourg

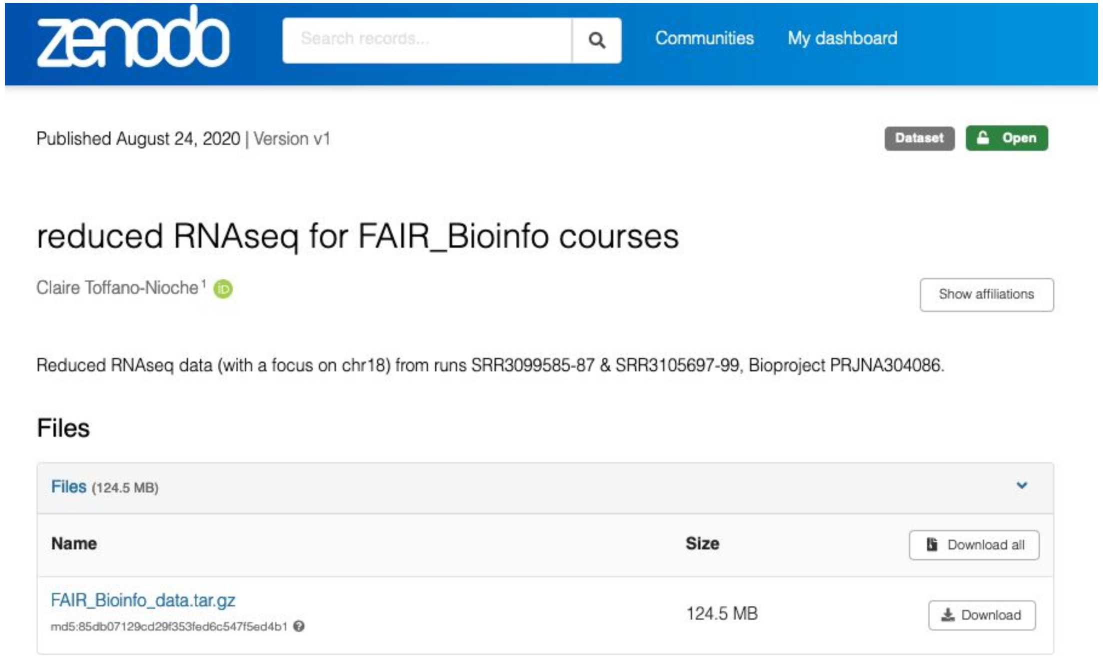


Use Case

Valérie Cognat

Dataset

- Study of iron metabolism in *Ostreoccoccus tauri*
- Available on Zenodo : https://zenodo.org/records/3997237
  - RNA-seq dataset of 6 librairies (subset of chromosome 18)
  - The reference genome
  - The annotation file



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reduced RNAseq for FAIR_Bioinfo courses

Claire Toffano-Nioche[1]

Reduced RNAseq data (with a focus on chr18) from runs SRR3099585-87 & SRR3105697-99, Bioproject PRJNA304086.

Files

Files (124.5 MB)

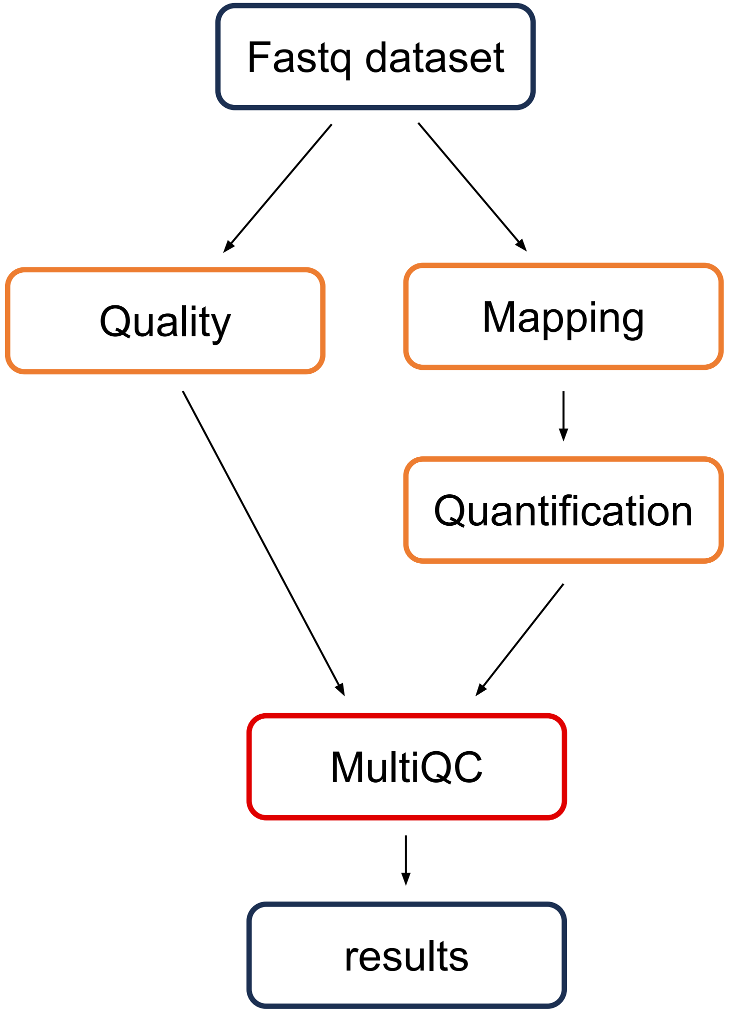
Name	Size
FAIR_Bioinfo_data.tar.gz md5:85db07129cd29f353fed6c547f5ed4b1	124.5 MB

Iron 9h Light	No iron 9h Light
SRR3099585	SRR3105697
SRR3099586	SRR3105698
SRR3099587	SRR3105699

```
module load zenodo_get
zenodo_get 3997237
```

Workflow to implement

- Quality check of raw data with **FastQC**
- Mapping on the genome reference with **Hisat2**
- Convert to bam file, sort, index with **samtools**
- Gene quantification with **htseq-count**
- [**DESeq** analysis (**R**)]
- Global report with **multiQC**



Use case – the aims

- Project management (data, repository)
- Traceability of the activities
- versioning management
- Environment management
- Containerization
- Share and disseminate codes & projects
- HPC: cluster
- Analysis workflow management

Questions ?