



# BIOREPC

## Introduction

The expansion of High Throughput Sequencing technologies forces biologists and bioinformaticians to find efficient solutions for managing and storing their data. BioRepo (Biological data Repository) addresses those needs : it allows to store, manage and share data amongst collaborators, but also facilitates visualisation in publicly available genome browsers.



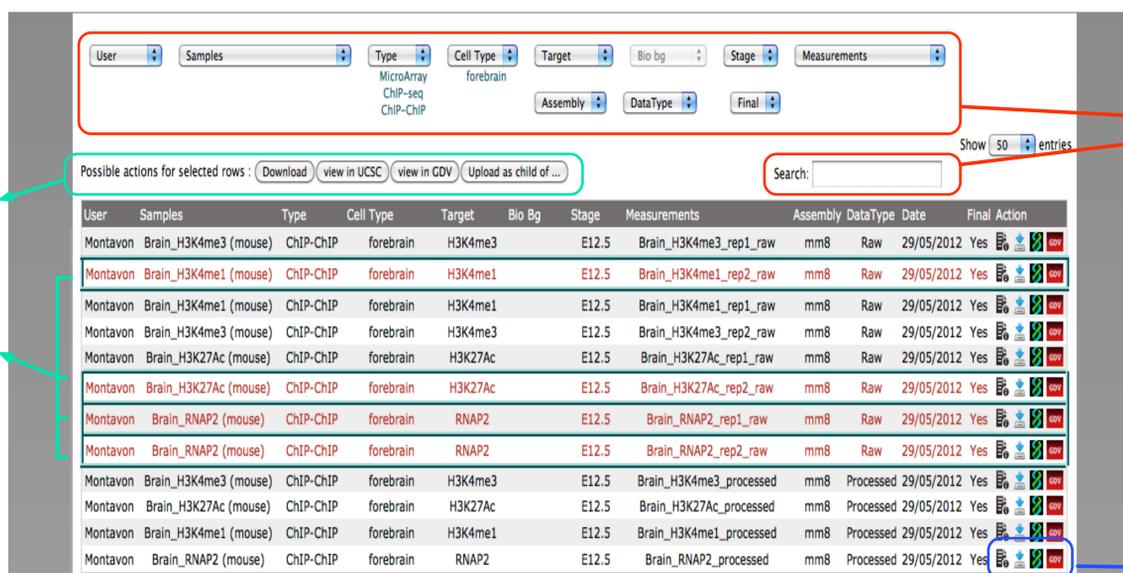
## Functionalities

All file formats are accepted

Two ways to upload data : internet browser or command line

It is possible to apply a common action to several selected measurements :

- Download
- Visualise (UCSC or GDV)
- Create new from existing



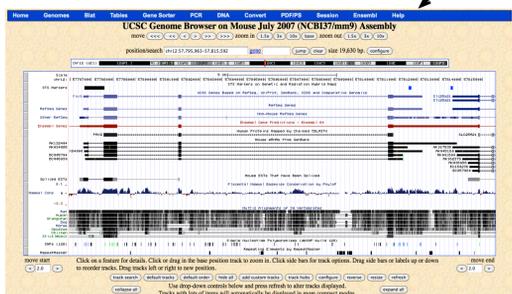
User	Samples	Type	Cell Type	Target	Bio Bg	Stage	Measurements	Assembly	Data Type	Date	Final	Action
Montavon	Brain_H3K4me3 (mouse)	ChIP-ChIP	forebrain	H3K4me3	E12.5	Brain_H3K4me3_rep1_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K4me1 (mouse)	ChIP-ChIP	forebrain	H3K4me1	E12.5	Brain_H3K4me1_rep2_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K4me1 (mouse)	ChIP-ChIP	forebrain	H3K4me1	E12.5	Brain_H3K4me1_rep1_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K4me3 (mouse)	ChIP-ChIP	forebrain	H3K4me3	E12.5	Brain_H3K4me3_rep2_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K27Ac (mouse)	ChIP-ChIP	forebrain	H3K27Ac	E12.5	Brain_H3K27Ac_rep1_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K27Ac (mouse)	ChIP-ChIP	forebrain	H3K27Ac	E12.5	Brain_H3K27Ac_rep2_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_RNAP2 (mouse)	ChIP-ChIP	forebrain	RNAP2	E12.5	Brain_RNAP2_rep1_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_RNAP2 (mouse)	ChIP-ChIP	forebrain	RNAP2	E12.5	Brain_RNAP2_rep2_raw	mm8	Raw	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K4me3 (mouse)	ChIP-ChIP	forebrain	H3K4me3	E12.5	Brain_H3K4me3_processed	mm8	Processed	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K27Ac (mouse)	ChIP-ChIP	forebrain	H3K27Ac	E12.5	Brain_H3K27Ac_processed	mm8	Processed	29/05/2012	Yes	Eye	Download
Montavon	Brain_H3K4me1 (mouse)	ChIP-ChIP	forebrain	H3K4me1	E12.5	Brain_H3K4me1_processed	mm8	Processed	29/05/2012	Yes	Eye	Download
Montavon	Brain_RNAP2 (mouse)	ChIP-ChIP	forebrain	RNAP2	E12.5	Brain_RNAP2_processed	mm8	Processed	29/05/2012	Yes	Eye	Download

efficient search : free text and/or category-based search

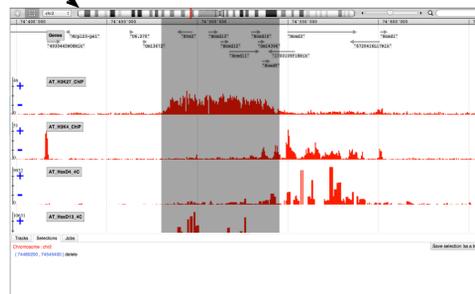
Icons : additional information, download, visualisation in genome browser (UCSC or GDV)

## Visualisation

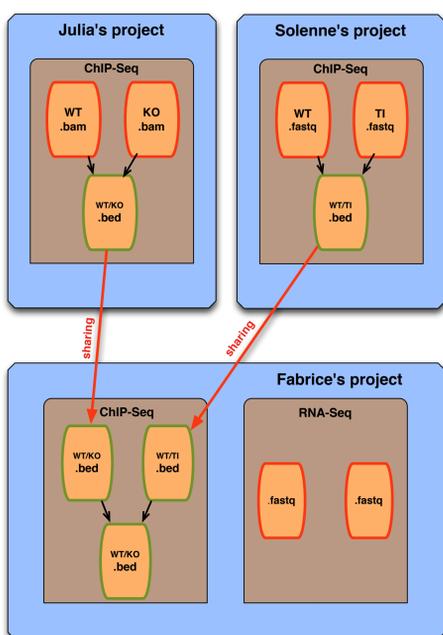
in UCSC



in GDV



## Sharing and Tracking



WT = Wild Type; TI = Total Input; KO = Knock Out

Three main levels : Project, Sample and Measurement.

A measurement represents a dataset (for e.g. .bed file, raw data) and can be associated to one or several samples (containing ChIP-Seq data for e.g.). One or many measurements create a sample.

A sample is always attached to a unique project (which can involve RNA-Seq and/or ChIP-Seq data for e.g.).

Here, Fabrice uses public measurements from Julia's and Solenne's projects and produces a new one by combining them.

Moreover, they can choose to keep some other measurements as private.

If a measurement combines several previous measurements, BioRepo keeps track of their filiation.



## References

- <http://www.turbogears.org>
- <http://www.sqlachemy.org>
- <http://www.jquery.com>
- <http://www.datatables.net>