Introduction to
Next Generation Sequencing
data analysis

Céline Keime keime@igbmc.fr
Stéphanie Le Gras slegras@igbmc.fr

Introduction to Next Generation Sequencing data analysis

- Overview of Next Generation Sequencing technologies
- Introduction to Galaxy
- RNA sequencing: library preparation and experimental design
- Introduction to practical sessions
- Quality control of Illumina data
- NGS read mapping
- Analysis of RNA-seq data
- Data mining with Ensembl Biomart
- Functional analysis of RNA-seq data
- ChIP-sequencing: library preparation and experimental design
- Mapping and visualization of ChIP-seq data
- Peak calling of ChIP-seq data
- Analysis of ChIP-seq peaks
- NGS analysis automatization: Galaxy workflows
- RNA-seq and ChIP-seq data integration

Data files and courses

- **Files needed for practical sessions**
  - ftp server
    - ftp://ngs.igbmc.fr/analyzeddata/
    - Login : CNRStraining
    - Password : CNRStraining
  - GalaxEast
    - Shared Data / Data Libraries / CNRS training
- **Courses and answers to questions addressed during practical sessions**
  - http://genomeast.igbmc.fr/wiki/
  - → Training
  - → Introduction to Next Generation Sequencing data analysis