Basic bioinformatics concepts, databases and tools

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What you will learn in this training

Introduction to bioinformatics

Exploring and understanding bioinformatics databases and tools for every day use

! If I use a term that is unclear, please stop me and ask !
What is bioinformatics?

**BIO**

Data is obtained by taking measurements from biological samples.

**INFORMATICS**

Data is stored and analyzed on computers.
Topics handled in the training

**Module 1**: Sequence databases: what, where, how

**Module 2**: Sequence comparisons: searching, aligning

**Module 3**: Sequence analysis: motifs in promoter sequences, predicting characteristics based on sequences

**Module 4**: Beyond sequences: additional important data sources

**Module 5**: Integration of biological data
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Module 1: Sequence databases
- DNAseq1: GACAAACTTAT
- DNAseq2: CTATATCTTAAA

Module 2: Sequence comparison
- GACAAACTTAT
- CTATATCTTAAA

Module 3: Sequence analysis
- DNAseq1: GACAAACTTAT TATA box TAGG
- proteinseq1: MDKLMHLEGEMESEQENCING
  Secreted ? Phosphorylated ?

Module 4: Beyond sequences
- PKN1
  GO Biol proc: glycolysis
  3D structure: PDB 1PKN
  Interactions: TBS4

Module 5: Integration

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