# E5444 Analysis of sequencing data

Lesson 2 – Projects description

# Projects description

## Group project

- During the semester Group project (2-3
  persons) max 20 points finished before the
  start of the exam period
- Aim: Analysis of NGS data from raw data to interpretation
- Data: Downloaded from databases or your own
- The projects will be defended last two weeks of the semester
- The project has to score minimum 10 points
- PROJECTS MUST BE SELECTED before 13.10.2023

# Project

### Type of samples:

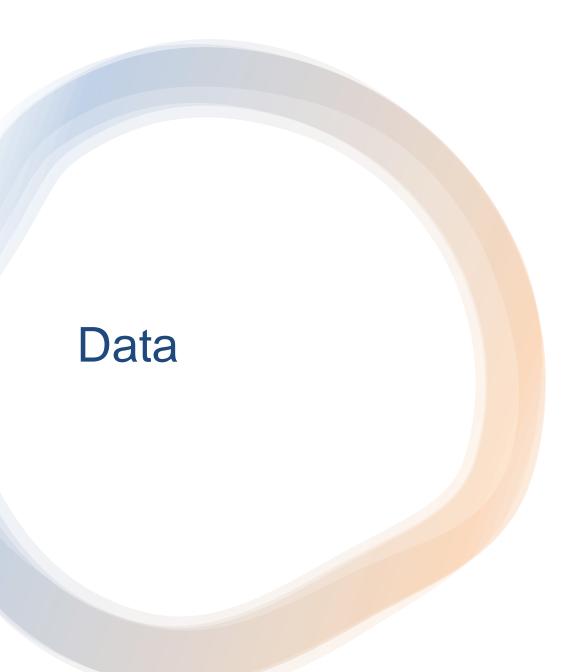
 Bacteria/fungi/mouse/human/plant/metage nome

## Type of sequencing:

 WGS, WMGS, RNAseq, variant calling, ITS/16S

## Possible aims and numbers of samples:

- identification of strains (5-10) by WGS taxonomy/phylogeny
- differentially expressed genes (min 10 per group) by RNAseq / functions/pathways
- identification of mutations by targeted sequencing of mutations (min 10 per group)
- identification of taxonomical composition /functional annotation (min 10 per group)



- Own data or publicly available data
- Published article, with clear methodology and sample preparation
- Instrument:
  - Illumina (MiSeq, HiSeq, NextSeq, NovaSeq)
- Strategy:
  - RNA Seq, WGS, WES, WMGS, 16S/ITS
- Layout:
  - Single, Paired
- Organism:
  - Human, Mouse/Rat, Bacteria, Fungi, Plant
- Processing:
  - Raw read files