

## Seminar: High-Throughput Technologies

**Objective:** To prepare presentations on important technologies in various “omics areas”

**Style:** Oral presentation with/without use of whiteboard. A teacher picks a student to explain a given technology and after a *short* presentation we discuss interesting features together. For each technology, discuss the method in general terms, explain features and limitations of the produced data as well as you can, and mention a scientific work/paper in which they used the technology.

**Due:** Tuesday, Feb 1

Work in groups!

Everyone shall be ready to present all of the following.

- DNA sequencing:
  - Sanger sequencing
  - “454 sequencing” using the Genome Sequencer from Roche
  - “Illumina sequencing” (previously called “Solexa”)
  - “Solid sequencing” from Applied Biosystems
- Transcriptomics:
  - Affymetrix microarray analysis
  - RNA-seq
- Proteomics:
  - Shotgun proteomics
  - Stable isotope labeling by amino acids in cell culture

All in all 8 technologies.