

## OMICS and sequencing



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### Instrumentation:

The Facility provides services for next-generation sequencing (NGS) for both DNA and RNA sequence analysis. Illumina sequencing technology based next generation sequencing, Sanger sequencing and quantitative PCR methods (qPCR and digital PCR) are Currently available.

Preparation of libraries for various applications is supported by a robust instrumentation infrastructure (e.g. Covaris, Bioanalyzer, Quantus, Maxwell and more). Large numbers of incoming samples can be handled stringently and in a timely manner through expansion and automation of our instrumentation infrastructure (e.g. by acquisition of liquid handling robots).

#### Currently available instrumentation:

##### *Next generation sequencing:*

- Illumina MiSeq (2 instruments)

##### *Digital PCR:*

- ThermoFisher QuantStudio 3D dPCR

##### *Realtime PCR:*

- ThermoFisher QuantStudio 5 Real-Time PCR
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#### Instrumentations expected in the near future:

- Illumina NextSeq550 DX
- Illumina NextSeq2000
- Oxford Nanopore Technologies GridION

### Services:

- capture- and amplicon-based gene panel sequencing (including custom panels)
- targeted resequencing, Sanger sequencing
- digitalPCR assays (including custom assays/probes)
- RT-qPCR

#### Currently being established:

- Whole exome (WES) sequencing
- RNA sequencing including whole RNASeq and smallRNASeq
- chromatin based analyses (including ATAC-seq, CHIP-seq)
- DNA methylation analyses (DNA bisulfite treatment-based, direct detection by ONT technology)

## Contact Information:

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