**Master projects available in the Hansen group**

The Hansen research group is recruiting Master students to take part in projects related to gene transcription and epigenetics in human diseases.

**Main area: Epigenetics and Cell biology**

**Target group: Biochemistry, Molecular Biomedicine, Biology**

**Educational level: Masters**

**Project description:**
Our group studies how transcription factors (TFs) found mutated in neurological diseases and cancer influence gene activation and/or repression through changes to the epigenome. We investigate how specific TF mutations affect protein-protein interactions, gene targeting and histone modifications influencing transcription. We use a number of molecular and biochemical techniques, as well as high throughput methods based on DNA- and RNA-sequencing. Our overall goal is to provide knowledge that can be used for designing drugs for future patient treatment.

If you are interested in being a valuable part of our exiting research projects, and guided by your supervisor in the laboratory, please contact Klaus Hansen for a meeting, where you will get deeper insight to the current available Master projects.

**Methods used:**
Chromatin Immunoprecipitation and DNA-sequencing (ChIP-seq), RNA-sequencing, CRISPR-mediated genome editing, bioinformatics, protein purification and mass-spectrometry (SILAC), Size-Exclusion Chromatography (FPLC) for complex profiling, protein co-immunoprecipitation and Western blotting.

**Keywords:**
Transcription factors, epigenetics, CRISPR, ChIP- and RNA-seq, stem cells, neurological disorders and cancer

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