

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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