Bachelor or Master thesis BIOVIT 2023/24

Topic/Title (Norwegian):
Vevs-spesifikk genuttrykksanalyse for frøhvile med RT-PCR

Topic/Title (English)
Tissue specific gene expression for seed dormancy in wheat using RT-PCR

Summary
Pre-harvest sprouting is a serious quality issue in the wheat production and occurs when seeds of cultivars with insufficient seed dormancy starts to germinate in the heads before harvest due to rainy weather. We have collected developing grains at different timepoints from wheat genotypes with high and low seed dormancy levels, respectively. RNASeq data from one timepoint has been analyzed for three grain tissues (aleurone, embryo and starchy endosperm). We are looking for a student interested in bioinformatics analysis, who will also work in the lab with grain tissue dissection and RT-PCR analysis. The aim of the project is to use bioinformatic tools to select candidate genes identified in our forgoing analysis and study their expression patterns during grain development.

Subject area (keywords) molecular genetics, seed dormancy, bioinformatics

Language thesis Norwegian and/or English

Bachelor or Master thesis Master thesis

Credits 60 ECTS

Project/company SproutResist (NFR 321436): Genomic-based breeding technology for the improvement of pre-harvest sprouting resistance in spring wheat under Norwegian climate

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