

**Department of Forest Genetics and Forest Plant Breeding
Georg-August-Universität Göttingen**

Büsgenweg 2,
37077 Göttingen,
Göttingen.

Master's Thesis Announcement

Title:

*GWAS-Based Identification of Genetic Footprints for Drought Stress
Adaptation in European Oak (Quercus robur)*

Thesis Overview:

This thesis aims to investigate the genetic basis of drought stress adaptation in two subspecies of *Quercus robur*—*subsp. pedunculiflora* (Romanian and German pedunculate oak stands)—using genome-wide association studies (GWAS) based on whole-genome re-sequencing data from 400 individuals. These populations span a wide ecological adaptation range, making them an ideal panel for studying and identifying adaptive variations.

Tasks:

The student will analyse phenotypic and genotypic data from 400 oak trees to identify genomic regions and potential candidate genes associated with trait variation.

The role also includes participation in data collection and curation in an ongoing greenhouse and lab experiment.

Your Profile:

Some experience with R is needed. Some knowledge in Forest tree genetics/biology and a willingness to participate in greenhouse and/or laboratory exercises.

Contact:

Prof. Dr. Oliver Gailing – ogailing@gwdg.de
Leke Victor Aiyesa – lekevector.aiyesa@uni-goettingen.de

Department of Forest Genetics
and Forest Tree Breeding

