

## Postdoctoral positions in Plant functional genomics

**2 Postdoctoral positions are available in Biomass Functional Genomics of grasses** in the laboratory of Dr. Million Tadege, Department of Plant and Soil Sciences, Oklahoma State University, Stillwater, OK 74078. The goal of the project is to identify key regulatory genetic networks and integrate developmental and metabolic pathways to understand the major routes of biomass synthesis and accumulation in switchgrass and sorghum. We have two openings: **I. Leaf blade development and C<sub>4</sub> anatomy** and **II. Floral Transition**. Both positions will benefit from a *Tnt1*-tagged population of *Medicago truncatula* where exciting mutants in leaf development, flowering time, plant size and shoot apical meristem function have been collected. Incumbents will have the opportunity to work on the *Medicago* genes while discovering similar pathways in grasses. The work will use *Brachypodium distachyon* and *Sorghum bicolor* as C<sub>3</sub> and C<sub>4</sub> models, respectively, and will target switchgrass for modification of biomass properties.

**I. Leaf blade development and C<sub>4</sub> anatomy:** We have recently identified the *Medicago* gene *STENOFOLIA* (*STF*) to be the orthologue of *Nicotiana sylvestris* *LAM1*. *STF/LAM1* is a key transcriptional regulator required for lamina expansion, mesophyll tissue differentiation, vascular development and female fertility. The enthusiastic postdoc is expected to further characterize *STF* by identifying interaction partners and downstream targets to understand the mechanism of its function. The position is intended to identify the analogous gene(s) responsible for leaf blade development and Kranz anatomy in sorghum using a combination of transcript profiling, forward and reverse genetics approaches.

**II. Floral Transition:** We are looking for a highly motivated and talented postdoctoral scientist to initially characterize non-flowering mutants of *Medicago truncatula* and then move to C<sub>4</sub> grasses. The incumbent is expected to identify key flowering time genes in grasses using a comprehensive bioinformatics approach and manipulate flowering time in sorghum and switchgrass by genetic transformation.

Both positions are available immediately and will be renewed for up to four years based on performance. Salary is competitive and commensurate with experience. For both positions, Ph.D. in plant molecular biology or related field is required. Outstanding candidates with interest in plant development who are capable of independent thought and have strong publication records are encouraged to apply. We are looking for individuals with skills and experience in cellular and biomolecular techniques including one or more of the following: confocal microscopy, *in situ* hybridization, microarrays, protein-protein and protein-DNA interaction, laser microdissection, real time PCR, library construction and screening, phytohormone analysis and plant tissue culture. Fluency in spoken and written English is required. Experience with grasses is a plus, but not required. Experience with *Medicago* is not essential. The position offers a vibrant research atmosphere and collaboration with expertise in plant genetics and breeding, physiology, molecular genetics/genomics and biochemistry. Excellent opportunities are available to develop independent research projects for professional growth. To apply, please send a cover letter with a statement of research interests and CV including the names and contact information of three references by email to: [million.tadege@okstate.edu](mailto:million.tadege@okstate.edu), Phone: 405-744-9643. We encourage applications from

individuals of diverse backgrounds. Oklahoma State University is committed to affirmative action, equal opportunity and the diversity of its workforce.