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## Screening for genetic modifiers of dawdle in *Arabidopsis*

The *Arabidopsis* mutant dawdle (*ddl*) exhibits slow growth. In addition, *ddl* mutants have smaller rosette leaves, and the leaves are curled and the overall stature of the plant is reduced. Mutant plants also display short roots, delayed flowering time, altered floral organ numbers, defective floral organs, and reduced fertility. DDL encodes a protein with a FHA (fork-headed associated) interaction domain that may function as a positive regulator of cell proliferation, similar to other characterized FHA domain proteins of animal and yeast cells. However, the molecular mechanism of action of DDL is still unclear. We hypothesized that we can identify other genes relevant to DDL function by identifying genetic modifiers of *ddl*. The experimental approach chosen for this project was activation tagging. Over 6000 plants were *ddl* plants were grown and were inoculated with *Agrobacterium* harboring the activation tagging construct and allowed to self-fertilize. The seeds were harvested, planted and Basta herbicide was topically applied to select for the transgenic plants. The seeds from putative genetic modifiers will be collected and re-screened for the phenotype. This approach may identify proteins that affect cell proliferation or interact with DDL, and they should help us to better understand the molecular basis for plant growth and development.