The *Arabidopsis* SeedGenes Project

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We present here an update of the *Arabidopsis* SeedGenes Project. The purpose of this collaborative effort is to provide detailed information on indispensable genes with a knockout phenotype in the developing seed through a web-accessible database (www.seedgenes.org). The current database (January, 2005) presents information on 295 genes and 462 mutants. Included are 269 mutants generated at Syngenta, 32 produced at the Salk Institute, 22 from the Versailles collection of INRA/Genoplante, and 139 contributions from the *Arabidopsis* community. Identities of 174 genes have been confirmed through molecular complementation or the analysis of a sequenced duplicate allele. Information on another 30 *EMB* genes is being prepared for release in September.

Recent additions to the database include a detailed tutorial on screening for seed phenotypes, flanking sequence files and improved visualization of insertion sites for T-DNA mutants, updated gene models and BLAST results, confidence levels for gene identities, additional Nomarski images of mutant seeds, and links to ABRC seed stocks and outreach activities. Ongoing efforts include the analysis of expression data from developing seeds and the systematic identification of candidate *EMB* genes that represent promising targets for reverse genetics. Emphasis in the future will be placed on the use of reverse genetics to approach saturation for this valuable class of *Arabidopsis* genes with critical functions during plant growth and development. Members of the community are encouraged to utilize the SeedGenes database to learn more about existing collections of embryo-defective mutants and to determine whether a knockout of their favorite gene of interest is known to give a seed phenotype.

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