

**A Potential New Source of Rust (*Puccinia arachidis*) Resistance from Wild Peanut Relatives *Arachis stenosperma* and *Arachis batizocoi***

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Due to its low genetic diversity, cultivated peanut (*Arachis hypogaea*) is susceptible to many pathogens and pests and relatively few sources of resistance have been found in the cultivated gene pool. *Puccinia arachidis* (peanut rust) is a pathogen that plagues many peanut farmers around the world. Wild peanut relatives have been found to be resistant to various pathogens including rust. This project focuses on a population that has been produced by backcrossing *A. hypogaea* with an allotetraploid derived from the wild peanut relatives *A. batizocoi* and *A. stenosperma*, called GA-BatSten1. Segregant lines have been found to have resistance to rust along with other pathogens. The goal of this work is to genetically identify wild segments that confer the resistance to rust to enable the production of new resistant lines using marker assisted selection. For this, lines were phenotyped for rust and genotyped using the ThermoFisher Arachis Array with 36K SNP markers. Two highly resistant families from this population have been identified. This information will be used to breed a new peanut cultivar with rust resistance peanut that will be beneficial for peanut farmers around the world.