

Annual Report Summary

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**Project Title:** Association mapping of DNA markers to leaf spot resistance in cultivated peanut that can be used in breeding program.

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Funding received: \$5,000 for 2013

Progress Report (through Dec. 2013)

In order to determine resistance reactions with precision, disease evaluations must be conducted in controlled environments (i.e., growth chambers or greenhouse). In order to do such evaluations, the pathogen(s) must be available in particular growth stages, i.e., they must be producing spores.

*Cercospora arachidicola* and *Cercosporidium personatum* are the fungi that cause early and late leaf spots of peanuts. Both of these fungi grow very slowly in culture. We have successfully established cultures of both of these fungi from isolates occurring in Alabama fields. In addition, we have successfully produced conidia on culture plates and determined an optimum medium and incubation time for maximum spore production. Attempts have been made to inoculate plants with *C. arachidicola* inoculum, but have not been successful to date. Lack of success with inoculation may be due to low humidity levels or insufficient duration of high humidity.