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Research Category: BAR-CP

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Project Title: High Efficiency Method for Generating FHB-Resistant Barley: Removing Bottlenecks in the Pipeline for Deploying FHB Resistance Genes.

PROJECT 1 ABSTRACT

(1 Page Limit)

There is a continuing need for germplasm and genes that confer resistance to FHB, in wheat but even more so in barley, where there are relatively few natural sources of FHB resistance. Molecular genetic approaches allow FHB-resistance genes to be identified in other plant species, including research model plants. We have used this approach to identify plant genes that contribute to effective resistance against *F. graminearum* (partially funded by the USWBSI). These studies have been performed using either the model plant *Physcomitrella patens* (in which genes can be stably overexpressed or knocked out by physical disruption) or wheat [in which genes can be transiently suppressed through virus-induced gene silencing (VIGS) or overexpressed in stable transgenic plants]. The goal of this project is to test genes identified by these methods in barley.