00203-KL-042 Saturation mapping of a chromosome 3(3H) Fusarium head blight resistance QTL.

PI: Kleinhofs, Andris; E-mail: andyk@wsu.edu
Washington State University, Department of Crop and Soil Science, Pullman, WA 99164-6420

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PROJECT ABSTRACT
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Our ultimate goal is to saturate the Fusarium Head Blight (FHB) resistance quantitative trait loci (QTL) with molecular markers for use in molecular marker assisted breeding and map-based cloning of genes conferring resistance to FHB. The specific objective for this grant period is to saturate the chromosome 3(3H) FHB and DON QTL region maximally defined by the markers BCD907 and ABG471. This work will be accomplished using the rice genomic sequence, already available for the syntenic region, to identify homologous Triticeae expressed sequence tag (EST) clones. These clones will then be mapped genetically and used to identify bacterial artificial chromosome (BAC) clones from the barley cv. Morex BAC library. This work will saturate the target region with molecular markers enabling high resolution mapping of the QTL and eventual cloning of the genes conferring resistance to FHB.