

Analyzing Molecular Basis of Heat-Induced Loss of Wheat Resistance to Hessian Fly Infestation Using RNA-Sequencing

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Gene-for-Gene based plant resistance to parasites can be temperature-sensitive. The goal of our research is to understand the mechanisms of heat-induced loss of host plant resistance to parasites. We used wheat [*Triticum aestivium* (L.)] and Hessian fly [*Mayetiola destructor* (Say)] interaction as a system and determined genome-wide changes in gene expression caused by heat stress at the Hessian fly feeding tissues in wheat seedlings using RNA-Seq. We will discuss genes and metabolic pathways that are likely contribute to the reduced resistance efficiency of wheat plants under heat conditions.