

**INVOLVEMENT OF FUB4, A PUTATIVE SERINE HYDROLASE, IN FUSARIC ACID BIOSYNTHESIS
IN THE COTTON PATHOGEN *FUSARIUM OXYSPORUM* F. SP. *VASINFECTUM***

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Abstract

Previous work has determined that fusaric acid is required for virulence in the Australian isolate of *Fusarium oxysporum* f. sp. *vasinfectum* (Fov), which produce copious amounts of fusaric acid. Race 4 isolates, identified in the San Joaquin Valley of California, have caused serious losses and are a potential threat to US cotton production. These strains, similar to the Australian isolates, also produce fusaric acid in large quantities. To determine if fusaric acid is involved in the severe symptoms caused by this cotton pathogen, a deletion of a serine hydrolase (fub4), predicted to be involved in fusaric acid production, was constructed in a California race 4 strain. All independent gene deletions failed to produce fusaric acid. Subsequently, fusaric acid mutants were used in a disease assay with cotton, to determine if fusaric acid plays a role in Fov virulence.