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Studies on the *Pseudomonas syringae* pv. *tabaci* Fur protein

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Environmental iron concentrations coordinately regulate transcription of genes involved in iron aquisition and virulence via the ferric uptake rugulation(*fur*) system. We identified the *fur* gene by using Southern hybridization under low-stringency conditions with 250 bp fragment probes that were amplified by PCR from *Pseudomonas syringae* pv. *tabaci* genomic DNA with the putative primer and by sequencing the hybridizing clone of *P. syringae* pv. *tabaci* chromosomal DNA. A positive selection procedure involving the isolation of manganese-resistant mutants was used to isolate mutants that produce altered Fur protein. The hybridizing clone of *P. syringae* pv. *tabaci* chromosomal DNA complemented with its *fur* mutant. To analyze the functions of *fur* gene, we made a comparative two-Dimensional gel electrophoresis analysis of wild type strain and *fur* mutant strain and discoverd several different spots.