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Comparative genetic studies of Pathogenic and Non-pathogenic Strains of *Xanthomonas axonopodis pv citri (Xac)* Elucidate Bacterial Virulence Factors

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Abstract

The bacterial species *Xanthomonas axonopodis pv citri (Xac)* causing the citrus canker is one of the most devastating citrus diseases in the world. Morphological, biochemical and pathogenicity tests were carried out to identify and characterize the strains of bacteria causing citrus canker. These tests were used to detect differences between two pathogenic *X. axonopodis pv citri* strains isolated from citrus causing canker and two non-pathogenic strains isolated from healthy citrus leaves and fruit.

The type three effector system was present in pathogenic strains than in non-pathogenic strains, where they lacked the type three secretion system encoding genes. Some strain specific differences were also observed.

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