

Hybrid Event

26th International Conference on

Food Technology & Processing

17th International Conference on

Microbial Interactions & Microbial Ecology

October 05-06, 2022

Zurich, Switzerland

Wendland Adriane, J Food Ind Microbiol 2022, Volume 08

Pathogenicity of *Pseudomonas fluorescens* in common bean

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Common bean (*Phaseolus vulgaris* L.) belongs to the order Rosales, family Fabaceae (Leguminosae). Brazil stands out worldwide among the largest producers and consumers of beans, which are grown throughout the territory, in different environmental and national conditions. However, illness is one of the main factors of bean fever. Therefore, the objective of this study was to characterize and identify *Pseudomonas* isolates and verify the pathogenicity in the common bean crop. The method used for the biochemical characterization of the isolates were the LOPAT tests, and the method used for the molecular identification were the conventional PCR technique for the identification *P. fluorescens* using specific primers. To evaluate the pathogenicity of *Pseudomonas* isolates in common bean cultivars, plants of cultivars BRS Embaixador, BRS Esplendor, BRS Esteio, BSR FS 305 e BRS Marte were submitted to inoculation tests in a controlled environment and in a greenhouse using the isolates BRM 65465 and BRM 65466, by the multiple needle technique for perforating the leaf blade. From 3 to 14 days after inoculation, they were evaluated for the incidence of symptoms from the point of inoculation. The biochemical and molecular tests indicate that the isolates BRM 65465 and BRM 65466 are *Pseudomonas fluorescens*. The symptoms caused by the isolates BRM 65465 and BRM 65466 in the pathogenicity tests indicate that they are pathogenic for the common bean crop, where, in a greenhouse, under conditions of higher temperatures, the symptoms were shown more severe, compared to a controlled environment with milder temperatures.

Biography

Wendland Adriane graduated in Agronomy, University of Londrina-UEL (1997), Master's in Plant Pathology, ESALQ/USP (2000), PhD in phytopathology, ESALQ/USP (2005), specialization in Biotechnology, Munster University (2002). She is a Researcher at the Brazilian Agricultural Research Corporation-Embrapa Arroz e Feijão since 2006. She is a curator of Multifunctional Microorganisms Collection at Embrapa Arroz e Feijão since 2008. She works on the following topics: Bacteriology, genetic resistance to plant diseases, gene expression, genetic diversity, pathogenic and molecular characterization of microorganisms, development of microorganism-specific detection kits by LAMP, RPA, PCR-multiplex and portable biosensors. She coordinates projects on rapid molecular detection/diagnosis of multifunctional microorganisms for agriculture. It performs Technology Transfer of rapid tests for laboratories, institutions and interested companies. She is a professor of the discipline Bacteriology of Plants at UFG, permanent professor at the Postgraduate Program in Agricultural Production/Plant Health (PPGA/UFG) and collaborator at PPG Biotechnology at UFG and co-adviser at the PPG in Phytopathology at UnB. She advises undergraduate, masters, doctoral and postdoctoral students.

Received: September 30, 2022; **Accepted:** October 01, 2022; **Published:** October 05, 2022