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Authors: Sana Azaiez, Imen Ben Slimene, Ines Karkouch, Rym Essid, Selim Jallouli, Naceur Djebali, Salem Elkahoui, Ferid Limam, Olfa Tabbene



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**Biological control of the soft rot bacterium *Pectobacterium carotovorum* by *Bacillus amyloliquefaciens* strain Ar10 producing glycolipid-like compounds.**

Sana Azaiez<sup>1,2</sup>, Imen Ben Slimene<sup>1</sup>, Ines Karkouch<sup>1</sup>, Rym Essid<sup>1</sup>, Selim Jallouli<sup>1</sup>, Naceur Djebali<sup>1</sup>, Salem Elkahoui<sup>1</sup>, Ferid Limam<sup>1</sup>, Olfa Tabbene<sup>1</sup>

<sup>1</sup>Laboratoire des Substances Bioactives, Centre de Biotechnologie de Borj Cedria, BP-901, 2050 Hammam-lif, Tunisia

<sup>2</sup>Université Tunis El Manar, Campus Universitaire Farhat Hached, BP-94 Rommana, 1068 Tunis, Tunisia

**\*Correspondence to:** Olfa Tabbene

Laboratory of Bioactive Substances, Center of Biotechnology, Ecopark of Borj Cedria, Hammam-Lif, Tunisia

Email: tabb\_olfa@yahoo.fr

Phone/Fax: (00216) 79 32 57 28

## **ABSTRACT**

Four hundred and fifty bacteria were evaluated for antagonistic activity against bacterial soft rot of potato caused by *Pectobacterium carotovorum* sp strain II16. A strain Ar10 exhibiting potent antagonist activity has been identified as *Bacillus amyloliquefaciens* on the basis of biochemical and molecular characterization. Cell free supernatant showed a broad spectrum of antibacterial activity against human and phytopathogenic bacteria in the range of 10-60 AU / mL. Incubation of *P. carotovorum* cells with increasing concentrations of the antibacterial compound showed a killing rate of 94.8 and 96% at MIC and 2xMIC respectively. In addition, the antibacterial agent did not exert haemolytic activity at the active concentration and has been preliminary characterized by TLC and GC-MS as a glycolipid compound.

Treatment of potato tubers with strain Ar10 for 72h significantly reduced the severity of disease symptoms (100 and 85.05% reduction of necrosis deep / area and weight loss respectively). The same levels in disease symptoms severity was also recorded following treatment of potato tubers

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