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# ELECTRONIC ABSTRACT BOOK

in association with  
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## SESSION 2 - FOOD MICROBIOLOGY AND BIOTECHNOLOGY (NON HUMAN MEDICAL FOCUS)

### IN VITRO ASSESSMENT OF THE ANTAGONISTIC POTENTIAL OF BACILLUS SPP. AND PSEUDOMONAS SPP. AGAINST XANTHOMONAS CAMPESTRIS PV. CAMPESTRIS ISOLATED FROM WINTER OILSEED RAPE IN SERBIA

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#### Background:

Yield and quality of oilseed rape and other Brassicaceae vegetables are affected with plant pathogenic bacterium *Xanthomonas campestris* pv. *campestris* (Xcc), both worldwide and in Serbia. Considering the losses that can arise as a consequence of the infection with this pathogen, there is an increasing need for finding the effective and environmentally safe method for its suppression.

#### Objectives:

With the aim to find a promising biological control agent for managing Xcc infection on winter oilseed rape in Serbia, this research was based on evaluation of the in vitro antagonistic potential of the *Bacillus*- and *Pseudomonas*-like isolates obtained from the phyllosphere and rhizosphere of the diseased and healthy winter oilseed rape plants.

#### Methods:

Well diffusion technique was used to evaluate the potential inhibitory activity of the whole cultures and cell-free supernatants of the 36 *Bacillus*- and *Pseudomonas*-like isolates, against the collection of Serbian winter oilseed rape Xcc isolates. DNA of the isolates which were able to inhibit Xcc growth was amplified with the primers based on the sequences of *tuf* and *gyrB* genes for *Bacillus*- and *Pseudomonas*-like isolates, respectively and sequenced.

#### Results:

Nine *Bacillus* spp. isolates whose whole cultures showed antagonistic potential were identified as *B. thuringiensis*/*B. cereus* (5); *B. valesensis* (1); *B. mobilis* (1); *B. megaterium* (1) and *B. halotolerans* (1), while six *Pseudomonas* spp. isolates were identified as *P. orientalis* (4) and *P. fluorescens* (2). Only five isolates within three species (*B. valesensis*, *B. megaterium* and *P. orientalis*) had both, the activity of the whole culture and supernatant.

Keywords: antagonism, *Bacillus*, *Pseudomonas*