

## Workshop on Biotic and Abiotic Stress Tolerance in Plants: the Challenge for the 21st Century

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### Identification of *Brassica oleracea* proteins modulated by *Xanthomonas campestris* pv. *campestris* infection

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Cabbage (*Brassica oleracea* var. *Capitata*) is an important crop, widely cultivated and consumed in Brazil. One of the main factors that limit productivity is the occurrence of black rot, which can be considered one of the most destructive diseases that affects brassica plants. It is caused by the bacterium *Xanthomonas campestris* pv. *campestris* (Xcc) and is characterized by “V” shaped lesions and necrosis. The bacterium colonizes the xylem vessels and spreads to the entire plant. Black rot occurs in regions presenting high temperature and humidity and seeds are the main source of contamination. The pathogen can also be disseminated during cultural practices. The objective of this work was to evaluate the proteins expressed by the resistant genotype of *B. oleracea* (União) upon infection by Xcc. Leaves inoculated with distilled water (controle) and Xcc were collected at 24 h after inoculation. Approximately 0.1 g of leaf tissue was used for protein extraction using phenol and extraction buffer. Proteins were precipitated with ammonium acetate in methanol and suspended in hydration buffer. Approximately 600 ug of total proteins were submitted to bidimensional gel electrophoresis. The analysis of the 2D maps was performed in triplicate using the Image Master 2D Platinum® (GE Healthcare). The comparison of the profiles revealed 22 differentially expressed proteins, including 12 increased and 10 decreased in the inoculated plant. A total of 12 proteins were identified, most of which were involved in photosynthesis and photorespiration. Proteins involved in plant defense were also identified such as peroxidase, which was increased in the inoculated plant. The results obtained shed some light towards a better comprehension of the proteins modulated by Xcc infection in *B. oleracea* plants.

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