

IDENTIFYING DIFFERENTIALLY EXPRESSED PROTEINS DURING *PIPER-FUSARIUM* INTERACTION

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The Pará State is the principal Brazilian producer of black pepper (*Piper nigrum*), however, the spice's production has been damaged by the *Fusarium* disease. The fungi *Fusarium solani* f. sp. *piperis*, causal agent of this disease which attacks the plant root system promoting the root rot, leaves fall and plant death. *Piperaceae* plants, endemic of Amazon region and resistant to *Fusarium* disease, have been recently identified and host-pathogen interaction is being studied in order to understand this patho-system. The objective of this work was to evaluate five conditions of total protein extraction in order to identify differentially expressed proteins from *Piper* spp. during pathogen infection. The conditions used to roots and leaves protein extractions were salt buffer, sucrose buffer, glycerol buffer, urea buffer and sodium phosphate buffer. The protein extracts were concentrated by TCA precipitation, quantified by fluorometry and then analyzed by SDS-PAGE. Protein extraction conditions were optimized with roots and leaves material from non-infected plants. Salt and sucrose buffers conditions were more efficient for leaves, while all buffers were efficient for roots. Total protein was extracted in salt conditions from leaves and roots plants infected. The SDS-PAGE comparison of total protein from infected and non-infected plants shown two differential 10 and 30 kDa bands, which could be related to plant defense.

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