Protein Analysis of Pear Leaf Necrotic Virus-infected Pear (Pyrus pyrifolia Nitaka)

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Plants respond to environmental changes by altering their gene expression to meet the imposed conditions. Most genes involved in plant defense mechanism against invading pathogens are expressed in response to necrosis. To elucidate plausible cause(s) of pear leaf necrotic disease, we have investigated the difference(s) of gene expression between wild and diseased leaves of the pear. Total soluble proteins from the two different plants were isolated. Their crude extracts were analyzed by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE). Some differences in protein patterns were detected. Synthesis of new proteins were observed, while other proteins were not found on the gel in response to necrosis. These suggest that distinct proteins could be originated from the virus. The proteins are being characterized to figure out their amino acid compositions for the deduction of gene sequences.

key words: Pear leaf necrotic disease, SDS-PAGE

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