Phytotoxic Components Produced by Pathogenic *Fusarium* against Morning Glory

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A pathogenic isolate of *Fusarium*, *F. oxysporum* f. sp. *batatas* O-17 (PF), causes wilt disease in leaf etiolation in sweet potato (*Ipomoea batatas*) and morning glory (*Ipomoea tricolor*). Extracts from PF cultures were screened for phytotoxic components using a growth inhibition assay with morning glory seedlings. The extracts were fractionated using differential solvent extraction and two active compounds, ergosterol and fusalanipyrone, were isolated from the less-polar fraction. Growth inhibition of morning glory seedlings showed a sigmoidal dose-response relationship, with fusalanipyrone exhibiting a two order of magnitude higher EC_{50} value than ergosterol (18 nM and 1.6 μM, respectively). Both compounds showed lower growth inhibition activity towards lettuce seedlings (*Lactuca sativa*). This study provides information on the phytotoxic components of PF and discusses the mechanism behind PFf-induced phytotoxicity.

Key words: Pathogenic *Fusarium*, Fusalanipyrone, Morning Glory