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Biochemical and morphological variability in *Sclerotium rolfsii*

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ABSTRACT : *Sclerotium rolfsii* Sacc. (Teleomorph: *Athelia rolfsii* (Curzi) Tu & Kimbrough) is one of the devastating, cosmopolitan, ubiquitous, noxious, notorious, serious soil-borne and omnivorous pathogen with a diversified host range including both monocotyledonous and dicotyledonous plants encompassing more than 500 host species. Variability among 30 isolates of *Sclerotium rolfsii* (8 collar rot causing and 22 leaf spot causing) isolated from various hosts/soil samples is reported. The isolates varied in colony morphology, mycelial growth rate, halo zone formation around colony growth, sclerotium formation, sclerotial size, colour and their phenolic profile. High performance liquid chromatographic (HPLC) analysis of extracts of mycelia and sclerotia and ethyl acetate fraction of culture filtrate revealed several peaks and out of them, only 10 were identified, e.g., tannic, gallic, oxalic, caffeic, vanillic, ferulic, o-coumeric, chlorogenic, cinnamic and gentisic acids. They were present in the mycelia and sclerotia of all the isolates in varying amounts. However, tannic and gallic acids were not present in the culture filtrate of all the isolates along with some other phenolic acids and oxalic acid.

Key Words: *Sclerotium rolfsii;* variability; HPLC analysis; phenolic acids.