Metabolite production by species of Stemphylium

Morphology and phylogeny have been used to distinguish members of the plant pathogenic fungal genus Stemphylium. A third method for distinguishing species is by chemotaxonomy. The main goal of the present study was to investigate the chemical potential of Stemphylium via HPLC-UV-MS analysis, while also exploring the potential of chemotaxonomy as a robust identification method for Stemphylium. Several species were found to have species-specific metabolites, while other species were distinguishable by a broader metabolic profile rather than specific metabolites. Many previously described metabolites were found to be important for distinguishing species, while some unknown metabolites were also found to have important roles in distinguishing species of Stemphylium. This study is the first of its kind to investigate the chemical potential of Stemphylium across the whole genus.