

Diaporthalean fungi associated with canker and dieback of tree hosts in China, emphasising on *Cytospora* and *Diaporthe* (Diaporthales)

Chengming Tian, Xinlei Fan

Beijing Forestry University, China

Diaporthales represents an important order in *Sordariomycetes* containing taxa that are mainly isolated as endophytes, saprobes or plant pathogens on various hosts. Taxonomy of these pathogens is difficult due to their uninformative descriptions and similar asexual morphology. The primary aim of the present study was to redefine the taxonomy and phylogeny of a large collection of Diaporthales species associated with diverse hosts in China. In the current study, 12 families are involved here based on morphology and phylogeny. *Cytosporaceae* and *Diaporthaceae* are most common phytopathogenic taxa causing canker. Other nine different families associated with canker and dieback of tree hosts are morphologically treated and phylogenetically compared. These include Cryphonectriaceae, Gnomoniaceae, Melanconidaceae, Melanconiellaceae and Juglanconidaceae. Four new families (Diaporthosporellaceae, Diaporthostomataceae, Pseudomelanconidaceae, Synnemasporellaceae), and two new genus, *Dendrostoma* (Erythrogloeaceae) and *Sheathospora* (Melanconiellaceae) were introduced. Combined analyses of ITS, LSU, RPB2 and TEF1- α sequence data were used to construct the molecular phylogeny.