

**P.S.I-10 Genetic variability of *Botryosphaeriaceae* associated with grapevine in Brazil using RAPD and polymorphisms of rRNA-ITS region.**

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In Brazil, little is known about genetic diversity of *Botryosphaeriaceae* causing grapevine decline. The purpose of this work was to evaluate the genetic variability of *Botryosphaeriaceae* isolates from South and Southeast Brazil, in order to provide support to morphological identification of species. Forty-four *Botryosphaeriaceae* isolates from the collection of Embrapa Grape and Wine obtained from 29 cultivars of wine and table grapes showing dieback symptoms were used in this study. DNA was extracted and molecular analysis proceeded by PCR amplification of fragments. Initially, an exploratory RAPD analysis was carried out to investigate isolates variability. For this analysis, 110 fragments from 24 arbitrary primers were studied. Subsequently, the ITS region was amplified using primers ITS4 and ITS5, and the fragments were digested with nine restriction enzymes. NTSYS software package was used to estimate similarity between accessions as well as classification by the clustering algorithm UPGMA. The dendrogram resulting from RAPD analysis showed a range of similarity (DICE coefficient), between 45% and 100%. ITS similarity varied from 24% to 100%. On both analyses, two clades were observed. The former put together three anamorph species related to *Botryosphaeriaceae*, *Sphaeropsis viticola*, *Fusicoccum luteum* and *Fusicoccum aesculi*. *Lasiodiplodia* genus clustered to the second group. In order to provide further insight on the molecular characterization of the fungal species, ITS products will be sequenced and compared to fragments deposited in GenBank. Both analyses confirm *Botryosphaeriaceae* variability in Brazil and provide support to the morphological study.