Liriodenine, Early Antimicrobial Defence in Annona diversifolia

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Annonaceae aporphine alkaloids, of which liriodenine is the most abundant, have not been extensively studied from a biological standpoint. The goal of this study was to investigate the role of liriodenine in antimicrobial defense during early developmental stages in *Annona diversifolia*. The fungi *Rhizopus stolonifer* and *Aspergillus glaucus*, which are responsible for seed deterioration, were isolated during imbibition, and their antifungal activity was determined by diffusion, macrodilution, and metabolic inhibition assays using purified liriodenine and alkaloid extracts obtained from embryos, radicles, and roots at early developmental stages. The presence of liriodenine in extracts was quantified by high-performance liquid chromatography. Purified liriodenine and alkaloidal extracts inhibited both fungi, and there was a positive relationship between extract activity and amount of liriodenine contained therein. The quantity of liriodenine present in extracts suggests its importance in controlling other phytopathogens.

Key words: Alkaloid, Annonaceae, Early Development