FUNGICIDE EFFECTS OF ALLELOCHEMICALS PRODUCED BY THE LEAVES OF THE TROPICAL TREE *ZUELANIA GUIDONIA* (FLACOURTIACEAE)

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The allelochemical potential of *Zuelania guidonia* (Flacourtiaceae) was investigated by using a biodirected fractionation study as part of a long term project to search for bioactive compounds among the rich biodiversity of plant communities in the Ecological Reserve El Eden, Quintana Roo, Mexico. The MeOH extract and chromatographic fractions of the leaves of *Z. guidonia* was subjected to chromatographic purification to afford two active compounds, named Zuelasaponins A and B. The spectral properties of the compounds, including IR, ^{1}H NMR, and ^{13}C NMR data, suggested a triterpene glycosides skeleton for both compounds. Zuelasaponins A and B were evaluated for their ability to inhibit radial growth of four phytopathogenic fungi, *Fusarium oxysporum*, *Phytophthora parasitica*, *Phytophthora capsici*, and *Alternaria solani*. Full extract was less active than the isolated compounds; it only inhibited 10% the four phytopathogenic fungi. In general, the tested compounds showed significant inhibitory effect (30-50%) and reduced the radial growth of either fungal species in a concentration-dependent manner. The effect of this compound was similar to the commercial fungicide captan. In conclusion, the results of this study showed that the compounds isolated from *Z. guidonia* possess promising fungicide effects. Further work is in progress to determine the nature of the interaction of compounds with phytopathogenic fungi.