

Bactericidal and Fungicidal Activities of *Calia secundiflora* (Ort.) Yakovlev

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Calia secundiflora (Ortega) Yakovlev (Fabaceae) is considered a medicinal plant in Mexico but has scarcely been used because of the toxicity of its quinolizidine alkaloids. Several quinolizidine alkaloids have shown bactericidal, nematicidal, and fungicidal activities. The purpose of this study was to identify the alkaloids in the seeds and evaluate the activity of the organic extract on several phytopathogenic fungi and bacteria. An *in vitro* bioassay was conducted with species of the following phytopathogenic fungi: *Alternaria solani*, *Fusarium oxysporum* and *Monilia fructicola*; and of the following bacteria *Pseudomonas* sp., *Xanthomonas campestris* and *Erwinia carotovora*. Cytisine, lupinine, anagyrine, sparteine, *N*-methyl-cytisine, 5,6-dehydrolupanine, and lupanine were identified by liquid chromatography-mass spectrometry in the extract of seeds; the most abundant compound of the extract was cytisine. It was observed that the crude extract of *Calia secundiflora* was moderately active on bacteria and more potent on phytopathogenic fungi. In contrast cytisine showed the opposite effects.

Key words: *Calia secundiflora*, Quinolizidine Alkaloids, Toxicity