

**Antifeedant and ovicidal activities of a new cassane and other compounds from *Caesalpinia welwitschiana* Oliv. and *Caesalpinia bonduc* L. against *Tuta absoluta* (Lepidoptera: Gelechiidae)**

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**Abstract**

Methanolic extracts of liana of *Caesalpinia welwitschiana* and leaves of *C. bonduc* were found to possess moderate antifeedant and ovicidal activities against *Tuta absoluta*. Bioassay-guided isolation of constituents from the most active fraction of *C. welwitschiana* led to the identification of four known compounds [isobonducellin 1a and bonducellin 1 b, intricatinol 2, (-)-epigallocatechin-3-O-gallate 4] and one new constituent [welwitschianic acid 3]. The most active fraction of *C. bonduc* afforded two known constituents neocaesalpin L 5 and neocaesalpin A 6. The isolated structures were elucidated on the basis of their MS, UV, IR and 1 & 2 D NMR spectra and by comparison with literature data. Compounds 2, 4-6 were showed antifeedant and ovicidal properties against *T. absoluta*, some comparable to that of azadirachtin at 50, 100 and 200 ng/ml. Overall, the present study, conclude that the two species of the plant could be a promising source of ecofriendly botanical constituents.

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