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Modulatory effect of *Palicourea coriacea* (Rubiaceae) against damage induced by doxorubicin in somatic cells of *Drosophila melanogaster*

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ABSTRACT. *Palicourea coriacea*, popularly known as "douradinha", is a medicinal plant from the Brazilian Cerrado region used in folk medicine to treat kidney and urethral stones and kidney inflammation. We evaluated the cytotoxic, genotoxic, and possible antigenotoxic activities of an aqueous extract of *P. coriacea* on somatic cells of *Drosophila melanogaster*, using the somatic mutation and recombination test. We used third-stage larvae of *D. melanogaster* from a standard cross and a high bioactivation cross and tested 10 different doses of *P. coriacea* aqueous extract (5, 15, 25, 35, 50, 65, 80, 95, 110, and 125 mg/mL). Doxorubicin (0.125 mg/mL) was used as a positive control and distilled water as a negative control. None of the doses was lethal to the larvae.

There was no genotoxic effect at 5, 10, or 15 mg extract/mL. However, a significant decrease in the frequency of spots induced by doxorubicin was observed when administered with *P. coriacea* aqueous extract at these same doses. We conclude that *P. coriacea* aqueous extract is not cytotoxic or genotoxic at these doses, but it does protect against the genotoxic action of doxorubicin.

Key words: *Palicourea coriacea*; Cytotoxicity; Genotoxicity; Antigenotoxicity; SMART/wing

