

Recombinogenic effects of the aqueous extract of pulp from pequi fruit (*Caryocar brasiliense*) on somatic cells of *Drosophila melanogaster*

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ABSTRACT. *Caryocar brasiliense* Camb. is a tree popularly known in Central Brazil as pequi. Its fruit contains carotenes, retinols, vitamin C, and polyphenols. These compounds possess antioxidant properties preventing excessive free radical formation and modulating the genotoxicity of physical and chemical agents in the body. However, at high concentrations these compounds can have recombinogenic and mutagenic effects, because they can act as pro-oxidants. We examined the genotoxic effects of aqueous extracts of pequi pulp on wing spots of *Drosophila melanogaster* using the somatic mutation and recombination test (SMART). SMART was applied to a standard cross and to a high bioactivation cross. Two

types of descendants were obtained from these crosses: marked-heterozygous (*mwh + / + flr³*) and balancer-heterozygous (*mwh + / + TM3, Bds*). Seventy-two-hour larvae from both crosses were treated with pequi pulp extract at 1, 5 and 10%. The extract increased significantly the frequency of mutant spots when compared with the negative control. Recombinogenic effects were also observed in the *mwh/TM3* descendants.

Key words: Pequi; *Drosophila melanogaster*; SMART; Genotoxicity; Doxorubicin; *Caryocar brasiliense*