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Lapachol as an epithelial tumor inhibitor agent in *Drosophila melanogaster* heterozygote for tumor suppressor gene *wts*

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ABSTRACT. The search for new and effective antitumor agents with fewer cytotoxic side effects on normal tissue has increasingly become important. Lapachol, a natural organic compound isolated from the lapacho tree (*Tabebuia avellandedae*), is chemically identified as belonging to the naphthoquinone group and is known for its anti-inflammatory, analgesic and antibiotic properties, although there are questions about its effectiveness for treating neoplasic cells. We evaluated the antitumoral effects of lapachol by testing for clones of epithelial tumors in *Drosophila melanogaster*. Seventy-two-hour old larvae bred from *wts*/*TM3*, *Sb*[1] females and *mwh/mwh* males, were treated with different concentrations of lapachol (20, 40 and 60 µg/mL). Lapachol alone did not significantly increase the number of epithelial tumors. However, lapachol did significantly reduce the number of tumors provoked by doxorubicin.

Key words: *Drosophila melanogaster*; Naphthoquinone; Lapachol; Doxorubicin; *wts*

