

Yangambin Cytotoxicity: A Pharmacologically Active Lignan Obtained from *Ocotea duckei* Vattimo (Lauraceae)

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The *in vitro* cytotoxic potential of yangambin was evaluated. Yangambin is a pharmacologically active furofuran lignan obtained from the leaves of *Ocotea duckei*. It is the major compound from the lignoids fraction. Yangambin presented low cytotoxicity in all *in vitro* models analyzed. Its cytotoxicity to murine macrophages was measured by the Trypan blue dye exclusion test and MTT reduction assay, resulting in high CC₅₀ values of 187.0 µg/mL (383.3 µM) and 246.7 µg/mL (504.3 µM), respectively. The difference obtained in the inhibitory concentrations aforementioned can be explained, at least in part, by the different principles of the methods. While the MTT reduction assay evaluates the ability of yangambin to inhibit the activity of the mitochondrial enzyme succinate dehydrogenase, the Trypan blue dye exclusion test evaluates possible damages to the integrity of the cytoplasmic membrane which result in cell death. The capacity of yangambin to inhibit the sea urchin embryonic development showed that it has low antimitotic and teratogenic potential, once continued exposure of embryos to concentrations up to 500 µg/mL (1.025 µM) did not result in an inhibitory effect on the first egg cleavages. Such low *in vitro* cytotoxicity is correlated with the low acute toxicity previously studied. All these data, together with the various therapeutic properties of yangambin, make this lignan a promising one for a new drug.

Key words: Yangambin, Cytotoxicity, *Ocotea duckei*