



Antibacterial Activity and Toxicity of *Drimys brasiliensis*

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SUMMARY. Men have used medicinal plant properties to treat infectious diseases. Both the rise of emerging infectious diseases as the microbial resistance problem has stimulated the searching for new antimicrobial agents. This study evaluated the antibacterial activity and toxicity of crude extracts, fractions and pure compounds from *Drimys brasiliensis*. The antibacterial activity of five extracts, twelve fractions and five isolated compounds were tested against six Gram-positive and seven Gram-negative bacteria. The methodology used was agar dilution. The extract potential toxicities were evaluated using *Artemia salina* assay. Antibacterial activity tests showed some promising results, such as bark chloroform extract with minimum inhibitory concentration (MIC) of 62.5 µg/mL for *Bacillus cereus*, fraction G2 with MIC for *Staphylococcus aureus* of 62.5 µg/mL, and methoxy-polygodial compound with MIC to *Bacillus cereus* of 31.25 µg/mL. There was no activity against Gram-negative bacteria. The bark dichloromethane extract showed MIC of 1000 µg/mL against *Helicobacter pylori*. The best results corresponded to fractions E and G2, with a MIC of 500 µg/mL. Among the isolated compounds, polygodial showed better activity with MIC of 250 µg/mL. *Artemia salina* tests showed that the bark dichloromethane extract and the fractions E and G2 showed toxicity, with LC₅₀ values of 27.51, 25.29 and 139.7 µg/mL, respectively. The results showed the antibacterial activity of *Drimys brasiliensis*, with potential toxicity, but with possible antimutagenic action.

KEY WORDS: *Artemia salina*, *Drimys brasiliensis*, *Helicobacter pylori*, Minimum inhibitory concentration, Toxicity.

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