

TITLE: ANTIMICROBIAL POTENTIAL OF RHINELLA HENSELI'S VENOM (ANURA:BUFONIDAE)

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ABSTRACT:

The exposure of microorganisms to control agents induce the development of evolutionary mechanisms to overcome them. Because of this, the search for antimicrobial compounds with different mechanisms of action of those already used is a constant need because. The use of animals and plants as a source of bioactive compounds is common, given the existing biodiversity. Amphibians of the anura group (toads and frogs) produce compounds with bioactive potential. In the venom of these animals it was already identified alkaloids, steroids, amines and peptides with action against microorganisms. In this work, we sought to evaluate if the venom of a Bufonidae species native to southern Brazil has compounds with antimicrobial potential. The venomous secretion of *Rhinella henseli*, Lutz 1934, a native species of toad from southern Brazil, was collected by manually compressing of the venom glands. The venom was conditioned in phosphate buffer (0.1 %). The crude secretion was also evaluated. To verify the inhibitory potential the bacterial selected were: *Escherichia coli*, *Staphylococcus saprophyticus* and *Candida albicans*. The techniques used to test the sample were microdilution (MIC) and agar diffusion, both in Mueller-Hinton media. The antimicrobial activity of the venom was observed only in the agar diffusion test. The venom inhibit *S. saprophyticus* and reduced the growth of *C. albicans*. No activity was observed against *E. coli*. Concentrations were not well established, but preliminary tests with lyophilized sample resulted in similar data at a concentration of 100 mg / mL. The potential for inhibiting microorganisms from the venom of this native species is important both for human health and for the conservation of amphibians, as emerging pathogens have been causing a decline of 500 species worldwide.

Keywords: frog, biodiversity, bioactivity, antibacterial.