SYNTHESIS, STRUCTURE AND BIOLOGICAL STUDIES OF THE ANALOGUES OF Hy-a1: PEPTIDE ISOLATED FROM THE SKIN SECRETION OF *Hyla Albopunctata*

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Nowadays, the increase of bacterial resistance has growing threat in medicine. In this manner, the search and development of new active molecules and targets had been accelerated. In this context, Castro's group extracted a single peptide with antimicrobial activity of the skin secretions from *Hyla albopunctata*. The aim of the present work was synthesized the peptide Hy-a1 (IFGAILPLALGALKNLIK-NH_2) and 2 analogues (IFGAILPLALGALKNLIK-COOH and IFGAIWPLALGALKNLIK-COOH) to supply information about of the importance of C-terminal group in its biological activity and structure. The tryptophan amino acid was used as probe to analyze the deeply of insertion in membrane mimetic. The peptides were synthesized by SPPS using the Fmoc chemical approach and conformational properties of the peptides were investigated by fluorescence spectroscopy and CD techniques in water, TFE (secondary structure-inducing agent) and in zwitterionic micelles (LPC). The antimicrobial activity was assayed by measuring growth inhibition of bacteria and fungus in liquid medium. The CD studies demonstrated that the peptides in the presence of the structure inductor agent and in micelles acquire high amount of α-helix. Additionally, the fluorescence showed high affinity binding between peptide and micelles. The biological activity results demonstrated that all synthetic peptide has similar activity. Supported by: FAPESP/CNPq.

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