

## PROTEOMIC ANALYSIS OF THE SKIN SECRETION OF THE MEXICAN FROG LITHOBATES PUSTOLOSUS

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Antimicrobial peptides (AMPs) are an essential part of innate immunity present in most living organisms. These small cationic peptides are multifunctional as effectors of innate immunity on skin and mucosal surfaces and have demonstrated direct antimicrobial activity against various bacteria, viruses, fungi, and parasites. *Lithobates pustulosus* is an endemic Mexican frog. To the best of our knowledge the biochemical data contained herein is the first report describing the skin secretion composition of this specie. Secretions were obtained by electrical stimulation, immediately stored at  $-20^{\circ}\text{C}$  and dried in a vacuum concentrator. Two milligrams of secretion was dissolved in water, centrifuged and the supernatant separated by RP-HPLC in an analytical C18 column. The main HPLC fractions were repurified, digest with endoproteases and analyzed by an LTQ Orbitrap XL mass spectrometer. Different dissociation methods were used to access the primary structure. All spectra generated were manually analyzed and searched against NCBI nr Database. By this mean, many antimicrobial peptides were identified, most of them belonging to brevinins, ranacyclins and ranatuerins families. However, many peptides “de novo” sequenced are unknown sequences that must be further studied at structural and pharmacological level.

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