

PRELIMINAR CHARACTERIZATION OF A NOVEL DIVALENT CATION
DEPENDENT HEMOLYSIN ISOLATED FROM THE SKIN SECRETION OF
THE FROG *ODONTOPHRYNUS CULTRIPES*

Libério, M.S.^{1,2}, Fontes, W.¹, Sousa, M.V.¹, Pires Júnior, O.R.², Sebben, A.²,
Castro, M.S.^{1,2}

¹Centro Brasileiro de Serviços e Pesquisas em Proteínas, Depto de Biologia Celular/IB, Universidade de Brasília; ²Lab. de Toxinologia, Depto de Ciências Fisiológicas/IB, Universidade de Brasília, Brasília/DF, Brazil.

Amphibian skin secretions contain different kinds of bioactive compounds, such as, steroids, alkaloids, biogenic amines and peptides. Among a large diversity of biological activities that these molecules may have, the hemolytic and the antimicrobial are of extreme relevance. This work aimed to characterize a novel hemolysin isolated from the skin secretion of *Odontophrynus cultripes* (Cycloramphidae). The toxin purified showed hemolytic activity in the presence of calcium and magnesium, although this wasn't observed in their absence or in the presence of EDTA. Phospholipase activity was also identified by spectrophotometric method. The results obtained using mass spectrometry analysis (MALDI-TOF technique) indicated a novel peptide with a molecular mass of 3073 Da. No antimicrobial activity was detected in the assays against *Staphylococcus aureus* and *Escherichia coli*. In conclusion, the new purified hemolysin has a proteic nature and exhibit phospholipase activity. Furthermore, the observations suggest the hemolytic activity is dependent on the presence of divalent cations. This peptide will be alkylated and submitted to Edman degradation in order to obtain its N-terminal sequence.

Key Words: *Odontophrynus cultripes*, skin secretion, hemolysin, divalent cation-dependence.