ISOLATION OF A PROTEIN WITH STRONG SURFACTANT ACTIVITY FROM THE FOAM NEST OF THE FROG *Leptodactylus vastus* Lutz, 1930

Hissa, D.C.[1], Vasconcelos, I.M.[2],Carvalho, A.F.U.[1], Nogueira, V.L.R.[1], , Antunes, A.S.L.[1], Pinto, N.W.[1], Paes, F.A.[1], Cascon, P[1]., Melo, V.M.M[1]

[1] Departamento de Biologia, Universidade Federal do Ceará, Ceará, Brazil
[2] Departamento de Bioquímica e Biologia Molecular, Universidade Federal do Ceará, Ceará, Brazil

Many species of insects, amphibians and fishes lay their eggs in stable foam, denominated foam nests, which by retaining moisture in the surrounding environment permit the eggs to be deposited out of the water. The neotropical frogs of genus *Leptodactylus* are examples of a group under transition of reproductive and larval development modes from aquatic to terrestrial habitat, which have benefited by the capacity of producing foam nests mainly in summer months. The aim of this work was to study some characteristics of the foam nests from the frog *L. vastus* which could explain their unusual stability and give light to their role in the protection of developing embryos. The foam nests contain 0.84 mg/mL of proteins and a strong surfactant activity was detected and associated to their proteins. This activity seems to be due mainly to a protein isolated by ion exchange chromatography, showing a molecular mass of 20 kDa and an N-terminal sequence of GFLVPKVVPGPTAALLKKALDD . It is discussed that the high stability of the foam nests may protect the embryos providing plenty of oxygen, moisture and nutrients and protection against aquatic predators. Besides, the foam nests absorb UV radiation (mainly at 230 and 280 nm) supporting their protective role against desiccation and sun damage.