A Peptide Fraction from Sapucaia (*Lecythis pisonis*) Seeds Presented Fungicidal Effect against *Candida albicans*

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**INTRODUCTION:** Antimicrobial peptides (AMPs) are small molecules, with basic character, cysteine-rich and with broad antimicrobial activity spectra that compose the primary defense of organisms. Their high specificity and capacity to cause membrane permeabilization of microorganisms turn them promising molecules for the development of new drugs. The aim of this work was to purify peptides from the seeds of sapucaia and to test their activity against *Candida albicans*. **MATERIAL AND METHODS:** Cotyledons (0.5g) were ground in liquid nitrogen, defatted with petroleum ether (15mL, 1h) and the proteins extracted (1% TFA, 1M HCl, 5% formic acid and 1% NaCl). The extraction was centrifuged (15,000g, 10min) and the supernatant filtered (0.22 µm) and load directly into a C18 reversed-phase column coupled to a C8 guard column and proteins eluted in a propanol gradient. Obtained fractions were analyzed by electrophoresis (Schägger and von Jagow, 1987). Fraction 4 was submitted to a new reversed-phase column in the same column with a new propanol gradient. Growth inhibition assay was done with *Candida albicans* in 96 well plates in sabouraud medium (30 ºC at 10 µg/mL of peptides). After the growth inhibition assay the cells were washed in sabouraud medium and seeded in sabouraud medium for viability test. **DISCUSSION AND RESULTS:** In the initial chromatography were obtained 13 fractions, one non-retained and 12 retained and eluted in a propanol gradient. From those, fraction 4 was selected because it presented the strongest activity against *Candida albicans*. This fraction was separated into new 5 fractions in new chromatography. Electrophoretic analysis indicated that only the last fraction was composed of peptides of 7 kDa. This fifth fraction inhibited 79.5% of the growth of *Candida albicans* and the viability test demonstrated that 97% of the cells lost viability. **CONCLUSION:** A peptide fraction was semi-purified and presented strong activity against *Candida albicans*.

Palavra chave: antimicrobial peptides, pathogenic yeast, fungicide
Patrocínio: FAPERJ, UENF.