

PROTEOMIC STUDY OF *CARICA CANDAMARCENSIS* LATEX

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The fruit latex from *Carica candamarcensis* contains a mixture of papain-like proteinases displaying high proteolytic activity, which are involved in protection against wounding. These proteinases participate in the process of latex coagulation at the bleeding site when the fruit is injured, i.e. as when the fruit is predated by feeding insects. In prior studies we proposed that latex proteinases might act in a way similar to blood proteinases in mammals, promoting clot formation, replacing necrotic tissue and remodeling reconstructed tissue at the site of injury. To better understand the role and the identity of these enzymes, we aimed their purification and biochemical characterization following fruit tapping. Fourteen discrete fractions were obtained from three chromatographies steps. The specific amidase activity measured with BAPNA substrate was several fold higher than the values previously reported for chymopapain or proteinase omega from *Carica papaya*. The N-terminal sequence of each protein was determined by automated Edman degradation revealing the variant forms of each fraction and the conserved motif GAVTPV featured by papain-like cysteine proteinases. The molecular mass by ES or MALDI-TOF mass spectroscopy confirmed these differences. With the available information we plan to study the role of these enzymes during latex coagulation.

Carica candamarcensis, Chromatography, Cysteine proteinases, Proteomic

Cyted, CNPq, Fapemig.