

## KINETIC OF ACTIVITY AND EXPRESSION OF *TRYPANOSOMA CRUZI* CATHEPSIN B

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Proteases are involved in many aspects of the physiology of parasites as well as in parasite-host interaction and are, therefore, considered good drug targets and vaccine candidates. *Trypanosoma cruzi* cathepsin B (TCCB) is active in acidic pH, nonspecific, polymorphic and antigenic in human infections. The main purpose of this study was to compare the gelatinolytic (proteolytic) activities of native cruzipain and cathepsin. Gel-gelatin enzymography followed by Western blot showed that the major acidic proteolytic activity of epimastigotes is mediated by TCCB and not by cruzipain. Although the same pattern was observed in trypomastigote and amastigote forms, the intensity of proteolysis is much lower than that displayed by epimastigotes. It was also observed that specific antibodies localized TCCB to vesicles, most likely lysosomal, of amastigote and epimastigote forms. These results lead to a change in the universal concept, which states that cruzipain mediates the main proteolysis in *T. cruzi* and launches a new paradigm in the design of drugs whose targets are cysteine proteases.

CNPq

*Trypanosoma cruzi*, proteases, cathepsin B