CLONING AND COMPLETE SEQUENCING OF CDNA ENCODING CALMODULIN FROM EGGS OF *RHODNIUS PROLIXUS*

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In eggs a fertilization-triggered event, named egg activation, regulates a vast array of Ca^{2+} release patterns that sets out several signaling pathways responsible for the ooplasm adaptation to the early embryo development. Calmodulin (CaM) is a ubiquitous, calcium-binding protein that can bind to and regulate a multitude of different protein targets, thereby affecting many different cellular functions mediated by Ca^{2+} increasing concentrations. In insects, the dynamics of Ca^{2+} signalling during egg activation and early embryogenesis are still not well understood. In this work the cDNA encoding CaM of the blood sucking bug *Rhodnius prolixus* was cloned and sequenced. mRNA from non fertilized eggs were used for cDNA synthesis using oligo-dT. After reverse transcription, degenerated primers were used to amplify the CaM coding region and the expected 450 bp fragment was completely sequenced. Reverse PCR was performed to determine 5' and 3' UTRs of CaM cDNA. Analysis of *R. prolixus* CaM coding region revealed high similarity to CaM from other insects and vertebrates. Two motifs, involved in transcription initiation, were found in the 5' UTR. It was identified in the 3' UTR a conserved motif found in insects, which binds to a transcription factor of early developmental genes, suggesting that CaM transcription might be important in the organization of early development of *R. prolixus.*

Supported by: CNPq and Fapesp