CHARACTERIZATION OF POLYPHOSPHATE IN THE EGGS OF *RHODNIUS PROLIXUS*

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Inorganic polyphosphate (Poly P) is a linear polymer of tens and even hundreds of orthophosphate (Pi) residues linked by high-energy phosphoanhydride bonds. Some different functions have been described for polyphosphates: ATP substitute, reservoir of Pi, chelator of metal ions, buffering properties and others. Likely a prominent precursor in prebiotic evolution, PolyP is found in nature and in different groups (bacteria, fungi, protozoa, plants and mammals). Nevertheless the growing description of PolyP functions, its importance during embryogenesis remains unknown. In that way, the present work describes the existence of polyphosphate molecules in the eggs of *Rhodnius prolixus*, a blood-sucking insect vector of the Chaga´s Disease. Egg contents of different days were diluted in water or had the polyphosphate content extracted with glassmilk. The levels of polyphosphate were measured with exopolyphosphatase treatment, pyrophosphate levels were measured with soluble pyrophosphatase and phosphate was detected with ammonium molybdate. Eletrophoretic assays were prepared in order to observe PolyP mobilization during embryogenesis and fluorescence microscopy was used to detect the subcellular localization of the polymer. Also, x-ray elemental analysis was used to detect the elemental composition of PolyP storage compartments. CNPQ, CAPES, FAPERJ, ICGEB and PRONEX sponsored this project.