

Proteins, Lipids and Sugars localization in the Embryonic Cuticle of *Rhodnius prolixus*

Ferreira, PSS¹; Ferreira, PL¹; Eizemberg, R¹; DeCicco, NNT¹; Atella, GC¹; Pavão, MSG¹; Masuda, H¹.

¹ Instituto de Bioquímica Médica, Centro de Ciências da Saúde, UFRJ, RJ.

The process of hatching of a *Rhodnius prolixus* insect was monitored in video and photography. During this process an embryonic cuticle is left behind associated with the eggshell. This cuticle is composed of proteins, lipids, sugars and other minor components (Ferreira, 2005). Here we analyzed the distribution of these different components in the cuticle. The cuticle was treated with 0,1mg/ml calcofluor in 25mM sodium phosphate buffer pH 6.35 and the fluorescence associated with chitin was monitored by fluorescent microscopy. The results showed that chitin is homogeneously distributed throughout the embryonic cuticle. On the other hand, sulphated sugar, detected with 0.05% DMB in 0.04 M glicin, 0.04 M sodium chloride and 0.1 acid chlorides, showed to be distributed in patches on the cuticle. The lipids of cuticle labeled with FITC (neutral lipids) or Texas-Red (phospholipids) fluorescence showed that lipids are evenly distributed along the cuticle. The fluorescence associated with these different components was analyzed in a fluorescent microscope (Zeiss – Axioskop 40). Fast Silver Staining technique for protein detection and Coomassie Blue coloration were adapted to localize proteins on the cuticle. The results showed that the proteins are distributed not evenly throughout the cuticle but rather in narrow lines .

Supported by: FAPERJ, CNPq and CAPES.

Key words: embryonic cuticle, *Rhodnius prolixus*, microscopy .