GMR Genetics and Molecular Research
Online Journal
ISSN:1676-5680

Thesis Abstract

Cytogenetic and protein quantification in polyploid somatic tissue of *Myrmeleon uniformis* (Neuroptera, Myrmeleontidae)

C.A. Pacheco, T.L. da Silva and M.K.H. Kobayashi

2002. Instituto de Biociências, Letras e Ciências Exatas,
Universidade Estadual Paulista "Júlio de Mesquita Filho",
São José do Rio Preto, SP, Brasil
Master thesis. Orienting Prof.: M.K.H. Kobayashi

Corresponding author: T.L. da Silva
E-mail: lucenabio@hotmail.com

Genet. Mol. Res. 14 (2): 3877-3878 (2015)
Received March 27, 2014
Accepted April 8, 2015
Published April 27, 2015
DOI http://dx.doi.org/10.4238/2015.April.27.1

Myrmeleon unifomis Malpighian tubules cells were analyzed under two aspects: chromatin structure and total protein quantification in the three larval phases (L_1, L_2 and L_3) and in adults. This insect Malpighian tubules present polyploid tissue resultant from endoreduplication, which probably begins in the first larval phases. The Malpighian tubule proximal region in L_2, L_3 and adult cells has polyploid nuclei, although the polyploid degree does not cause change in its morphology; nevertheless in the L_3 larvae distal region, polyploidization changes the cell morphology from a round to a multilobulate shape. Chromatin analysis in these nuclei by cytochemical techniques showed that the whole nucleus is filled out with a granular chromatin. In multilobulate nuclei during L_3 the chromatin is formed by a network of chromatin fibers. The nucleolar markings made in the several development phases of *Myrmeleon* sp showed the gradual increase that occurs during the larval phases and their reduction in the adult phase. This transcriptional activity was confirmed by total protein analyses, which were quantified by SDS-PAGE. The 39.8-kDa band deserves prominence, because it can be seen

from L_2 phase, increasing its intensity during L_3 and decreasing in the adult phase, indicating that this protein is related to production of the pupation cocoon.

Key words: Polyploidy; Endoreduplication; Malpighian tubules; Chromatin; Neuroptera; Antlion

