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KARYOTYPING CHARACTERIZATION OF A CONTINUOUS NEW CELL LINE FROM PUPAE OVARIES OF EGYPTIAN COTTON LEAF WORM *Spodoptera littoralis* (SL-OMI) ADAPTED ON 27°C

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ABSTRACT

A new ovarian cell line was established from pupae of Egyptian cotton leaf worm *Spodoptera littoralis*, cells were adapted at 27C and characterized at the morphological, growth, and karyotyping . The number of chromosomes was counted and compared with reference cell lines Sf9, Sl96 and with the number of chromosomes on eggs (*in vivo*) of the same source of insect. Cell doubling time was 24hr. Chromosomes were morphological typical to those described from other species of Lepidopterous. Chromosomes number was counted on 57 metaphases for the new cell line (SL omi) and it was ranged between 4-203 Chromosomes. As for 58 metaphases were prepared from eggs, the counted chromosomal number was ranged between 4- 24 on 57 metaphases and one only metaphase had 46 chromosomes. Obtained results from eggs chromosomes preparation and Sl omi was different from those prepared from Sf9, which ranged between 61and 263 in 68 metaphase (Ref).

INTRODUCTION

The Egyptian cotton leaf worm *Spodoptera littoralis* is an important pest of several crops. Biological control of this pest with nucleopolyhedro virus of SL-NPV has been exploited (Okada, 1977). it nevertheless may be worthwhile to get continuous cell lines of this species it may provide a useful tool for the study of the virus as well as of insect cell physiology. Several cell lines have been established from the insects of the same genus; *S. frugiperda* .(Vaughn *et al.*, 1977; Lynn and Oberlander, 1983), *S.exigue* (Geternter and Federici, 1986) and *S. ornithogalle* (Quhou *et al.*, 1984). In this study karyotyping was a first record for such study with this very important economic pest, and that is what lead to to compare the heterogeneity with the *Spodoptera littoralis* eggs, especially that when the modal number is close to the normal diploid number the variation about the mode is less when the modal number is greatly elevated (Valk *et al.* 1996). beside there were some comparative studies with SF9 and SL96 reference cell lines (Mitsuhashi,1984).

MATERIALS AND METHODS

Primary culture:

Cells were originated from pupae obtained from the healthy insect rearing unit in the center of virology fac.of Agric.Cairo Univ. The method used for establishing primary cell cultures was derived from that of Volk *et al.* (1996). About 30 selected females pupae were surface sterilized by