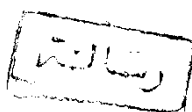


**BIOCHEMICAL ABERRATION INDUCED BY
CERTAIN INSECT GROWTH REGULATORS
(IGRs) IN HOUSE FLY, *MUSCA DOMESTICA*
(MUSCIDAE - DIPTERA)**



THESIS

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DEDICATION

*I have a great honour to dedicate this dissertation
and the including research to the spirit of
Professor Dr. Awni Mohamed Guneidy . who
learned me much in both moral and scientific
aspects .*

Saadya Mohamed El - Bermawy .

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ABSTRACT

The present study investigated the possible toxicological and biochemical effects of three selected insect growth regulators (*IKI* 7899, *BAY SIR* 8514 and *Sumilarv* 71639) on different treated stages of the house fly *M. domestica* , using different techniques of application .

Most treatments led to various morphological aberrations which mainly observed in the pupal and adult stages . The pattern of protein contents and behavior of enzymatic activities of LDH, α - GPDH and AcP were also explored in all developmental stages after treatments .

The *IKI* was found to be the most effective inhibitor for all parameters studied regardless the technique applied followed by *BAY SIR* which shown equipotent .

Key words : *Musca domestica* - Insect growth regulators - Morphological aberrations - Proteins - AcP - LDH and α - GPDH .

Abbreviations

<i>AcP</i>	<i>Acid Phosphatase^h</i>
<i>AlP</i>	<i>Alkaline Phosphatase</i>
<i>BSA</i>	<i>Bovine serum albumin</i>
<i>EMS</i>	<i>ethyl methanesulfonate</i>
α -GPDH	α -Glycerophosphate dehydrogenase
20-HE	20-Hydroxy ecdysone
IGR	Insect growth regulator
JH	Juvenile hormone
JHA	Juvenile hormone analogue
JHa ₁	(Isopropyl - 3, 7, 11 - trimethyl - 2,4 - dodeca dienoate) = ZR 515
JHE	Juvenile hormone esterase
JHM	Juvenile hormone mimic
LDH	lactate dehydrogenase
MDH	Malate dehydrogenase
ME	Malic enzyme
NAD ⁺	Nicotinamide adenine dinucleotide
PNP	Para - nitrophenol
Precocene I	(7 - methoxy - 2 -2- dimethyl chromene)
PTU	Phenylthiourea
RSA	Relative specific activity
R - 20458	[(1 - 4 - ethylphenoxy) - 6,7- epoxy - 3, 7 - dimethyl - 2 - octene] = stäuffer
SDH	Succinate dehydrogenase
SJH	Synthetic Juvenile hormone

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