





كلية البنات للآداب والعلوم والتربية
قسم النبات

Cytogenetic Effects of Some Stored Seeds Protectants Against *Bruchids* Pest on *Vicia faba* Plant

**A Thesis submitted for the Ph. D. in science
Botany
[Cytology and Cytogenetics]**

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التأثيرات الوراثية الخلوية لبعض المواد الواقية للبذور المخزونه من الإصابه بآفه خنفساء البقوليات على نبات الفول البلى

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للحصول على درجه الدكتوراه فى فلسفه العلوم
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List of abbreviations

Abn.	Abnormality
ADP	Adenosine di-phosphate
Ana- teloph.	Anaphase- telophase
ATP	Adenosine tri-phosphate
bcSP	black cumin seeds powder
Break.	Breakage
Brid.	Bridge
Dist.	Disturbance
DNA	De-oxy ribonucleic acid
EC	Effective concentration
ER	Endoplasmic reticulum
Ethyl alc.	Ethyl alcohol
F1	First generation
F2	Second generation
Frag.	Fragment
G1	FIRST GAP in cell cycle
G2	Second gap in cell cycle
IUPAC	International Union of Pure and Applied Chemistry
KD	Kilo Dalton
Kg	Kilo gram
Lag.	Lagging
LtSP	<i>Lupinus termis seeds powder</i>
M	Molar
M2	Second yield seeds
Mal.	Malathion 1%
Metaph.	Metaphase
MI	Mitotic index
MW.	Molecular weight
N	Normal
Nu.	Nucleus
PGs	Pollen grains
Phos.	Phosphine
PI	Phase index
PMCs	Pollen mothers cells
Proph.	Prophase
Stic.	Sticky
Struc, aberr.	Structural aberrations
TEM	Transmission electron microscope
TEM	Transmission electron microscope
USEPA	US Environmental Protection Agency

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