



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Ain Shams University Information Network  
جامعة عين شمس

شبكة المعلومات الجامعية

@ ASUNET



# شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأفلام قد أعدت دون أية تغييرات



## يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of  
15-25- c and relative humidity 20-40%

# بعض الوثائق الأصلية تالفة



# بالرسالة صفحات نم ترد بالاصل





# **Sensorimotor Neuropathy In Children With Collagen Diseases**

**Thesis  
Submitted for partial fulfillment  
of the Master Degree In Pediatrics**

***Presented by***  
***Trez Boshra Kamel***  
**M.B., B.Ch., (1997)**  
**Ain Shams University**

د. محمد مصطفى  
م. ب. ب. ش. ك. م. ١٩٩٧

***Under supervision of***

***PROF. DR. YEHIA MOHAMED EL GAMAL***

**Chairman of the Pediatric Department & Head of the  
Pediatric Allergy and Immunology Unit  
Faculty of Medicine, Ain Shams University**

**DR. NAHLA EL SAYED NAGY**  
**Lecturer of Neuropsychiatry**  
**Faculty of Medicine,**  
**Ain Shams University**

*Shereen Faei*

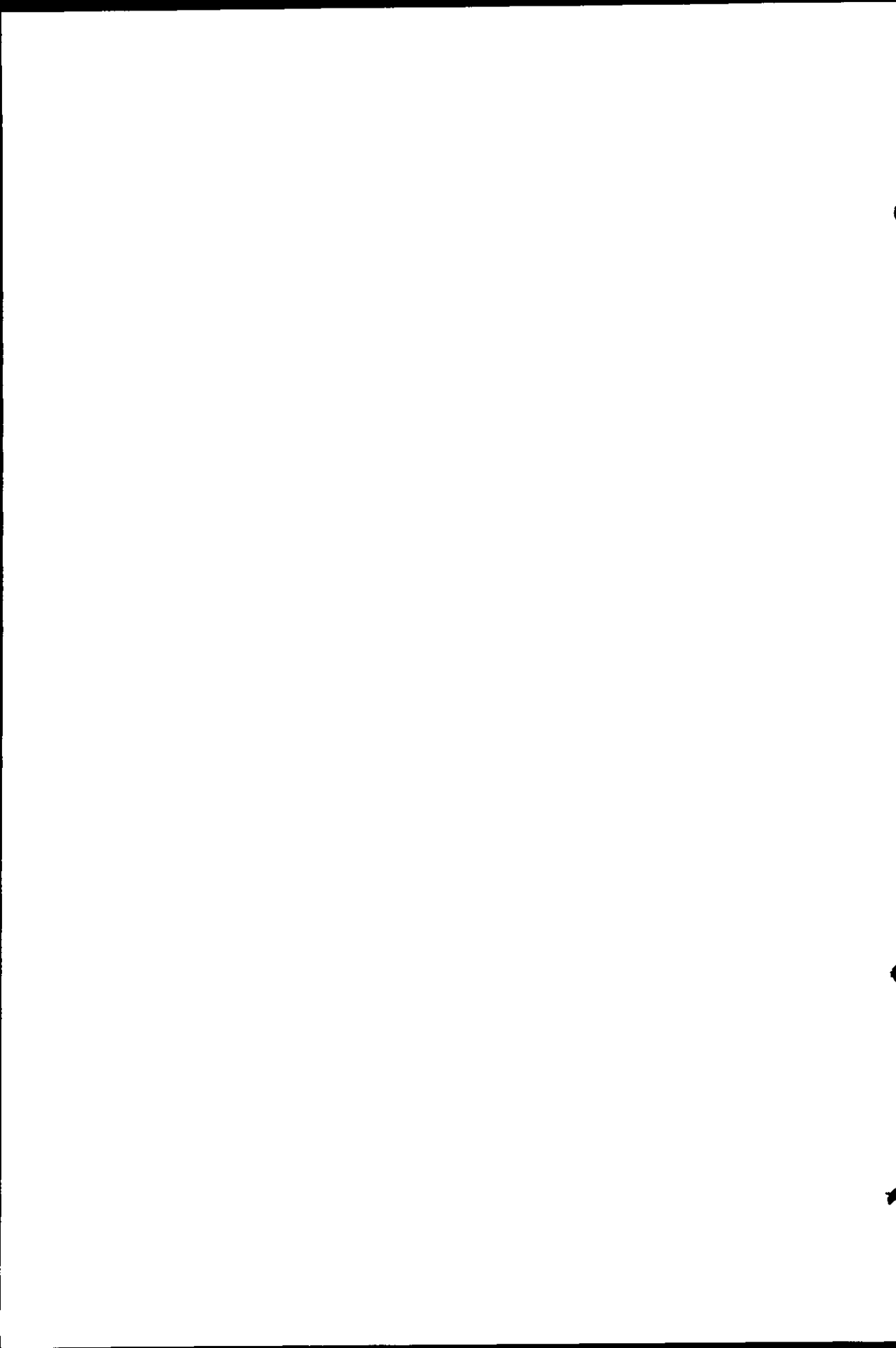
**DR. HODA YAHYA TOMOUM**  
**Lecturer of Pediatrics**  
**Faculty of Medicine,**  
**Ain Shams University**

**Faculty of Medicine**  
**Ain Shams University**  
**2001**



**To**  
***Our Patients***





## Acknowledgment

*At first and foremost thanks to "Allah" who gave me the power to finish this work.*

*I find no words by which I can express my deepest thanks and profound respect to my honored professor, **Professor Dr. Yehia Mohamed El Gamal**, Chairman of the Pediatric Department & Head of the Pediatric Allergy and Immunology Unit, Faculty of Medicine, Ain Shams University, for the continuous kind encouragement, guidance and support he gave me throughout the whole work. It has been an honour and a privilege to work under his generous supervision.*

*Also, I would like to express my deepest thanks and appreciation to **Dr. Nahla El Sayed Nagy**, Lecturer of Neuropsychiatry Faculty of Medicine, Ain Shams University for her great support, valuable time, careful supervision and continuous advices which helped me to over come many difficulties.*

*I am also deeply grateful and would like to express my sincere thanks and gratitude to **Dr. Hoda Yahya Tomoum**, Lecturer of pediatrics, Faculty of Medicine, Ain Shams University for her great help and continuous contributions in the practical part of this work.*

*I am greatly indebted to all my staff members in the Pediatric Department, for the great support and help offered throughout this study. To my colleagues and to everyone who participated in a way or another in this work, I owe my thanks and appreciation.*

*Last but not least, I would like to express my endless gratitude to my dear patients who were the corner stone of this work, wishing them a rapid and complete recovery.*

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This not only helps in tracking expenses but also ensures compliance with tax regulations.

In the second section, the author provides a detailed breakdown of the company's revenue streams. This includes sales from various product lines and services. The data shows a steady increase in revenue over the past year, which is attributed to market expansion and improved operational efficiency.

The third section focuses on the company's financial health and liquidity. It highlights the strong cash flow and the ability to meet all financial obligations. The author also mentions the company's commitment to maintaining a low debt-to-equity ratio, which is a key indicator of financial stability.

Finally, the document concludes with a summary of the company's overall performance and future outlook. The author expresses confidence in the company's ability to continue its growth trajectory and meet its long-term strategic goals.



# Contents

	<i>Page</i>
List of abbreviations.....	I
List of tables.....	IV
List of figures.....	VIII
<b>Introduction and Aim of the work.....</b>	<b>1</b>
<b>Review of Literature.....</b>	<b>3</b>
<b>Systemic lupus erythematosus</b>	
- Definition .....	3
- Epidemiology .....	3
- Pathogenesis .....	4
- Diagnosis	
*Clinical picture .....	7
*Criteria for classification.....	11
*Laboratory investigations .....	12
*Treatment .....	14
 <b>Juvenile rheumatoid arthritis:</b>	
- Definition .....	18
- Etiology and pathogenesis .....	18
- Diagnosis	
*Clinical manifestations .....	20
*Classification criteria .....	20
*Complications .....	22
*Laboratory investigations .....	23
*Radiological findings .....	27
- Treatment .....	28
- Prognosis .....	34
 <b>Peripheral Neuropathies</b>	
- Structure of peripheral nerves.....	35
- Blood nerve barrier .....	38
- Classification of peripheral neuropathies.....	41

<b>Neuropathy in RA</b>	
– Pathogenesis .....	44
– Clinical Picture .....	45
– Other neurological manifestation in RA .....	46
<b>Neuropsychiatric lupus</b>	
– Introduction & Pathogenesis .....	49
– Neurological features .....	53
– Peripheral neuropathy in SLE .....	54
– Psychiatric features .....	56
<b>Somatosensory evoked potentials (SSEPs)</b>	
– Introduction & definition ....	57
– Median nerve SSEPs .....	59
– Data collection and interpretation .....	61
– Clinical applications .....	63
<b>Subjects and Methods</b> .....	64
<b>Results</b> .....	72
<b>Discussion</b> .....	114
<b>Summary and Conclusion</b> .....	124
<b>References</b> .....	129
<b>Arabic Summary</b> .....	--

## List of Abbreviations

ACA	Anticardiolipin antibodies
AECA	Anti endothelial cell antibodies
AHA	Anti histone antibodies
ANA	Antinuclear antibody
ANCA	Anti-neutrophil cytoplasmic antibodies
APF	Anti-perinuclear factor
BAEPs	Brain stem auditory evoked potentials
BCSO	Black current seed oil
C2	Complement 2
C3	Complement 3
C4	Complement 4
Cc	Contralateral central scalp zone
CH50	Hemolytic complement 50
Cm	Centimeter
CNS	Central nervous system
CNTF	Ciliary nerve trophic factor
CRP	C reactive protein
CSF	Cerebrospinal fluid
C5SP	Fifth cervical spinal process
CT	Computed tomography
C.T	Connective tissue
DNA	Deoxyribonucleic acid
ds DNA	double stranded deoxyribonucleic acid
ECG	Electro cardiogram
EEG	Electro encephalogram
EP	Evoked potential
Epc	Erb's point contralateral
Epi	Erb's point ipsilateral
ESR	Erythrocyte sedimentation rate
F VIII RA	Factor VIII related antigen



FSH	Follicle stimulating hormone
FZ	Mid Frontal zone
GDNF	Glia derived neurotrophic factor
GTP	Guanosine tri-phosphate
Hb	Hemoglobin
HPA axis	Hypothalamic pituitary adrenal axis
HDL	High density lipoprotein
HLA	Human leucocytic antigen
HZ	Hertz
IgM	Immunoglobulin M
IgG	Immunoglobulin G
IL	Interleukin
IVIG	Intravenous immunoglobulin
JRA	Juvenile rheumatoid arthritis
kHz	Kilo hertz
LC	Lower cervical
LCA	Lympho-cytotoxic antibodies
LE	Lupus erythematosus
LH	Leutinizing hormone
Lt.	Left
MCP	Metacarpophalangeal
MEPs	Motor evoked potentials
Mg/kg/d	Milligram per kilogram per day
mg/m <sup>2</sup>	Milligram per square meter surface area
MHC	Major histocompatibility complex
mm.Hg	Millimeter mercury
MNCV	Motor nerve conduction velocity
m.sec	Millisecond
m/sec	Meter per second
MTP	metatarsophalangeal
MRI	Magnetic resonance imaging
MTX	Methotrexate