



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية  
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# شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم





شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

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



## 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 لم ترد بالاصل



B.V.M.

# **Renal tubular dysfunction in patients with non-insulin dependent diabetes mellitus**

**Thesis**

Submitted for partial fulfillment of the Master Degree in  
Biochemistry

By

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Assuit University  
2005



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
﴿قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا  
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ﴾  
صَدَقَ اللَّهُ الْعَظِيمُ





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**Randa Mostafa El-Aggan**

**2005**



**Thanks to Allah for creating us all,  
To my Parents,  
To my Mother in law,  
To the dearest, my Husband and my Son.**



## **List of Abbreviations**

<b>2-h PG</b>	2-hour post glucose load
<b>ACE</b>	Angiotensin-converting-enzyme
<b>ACE-I</b>	Angiotensin converting enzyme inhibitor
<b>ADA</b>	American Diabetes Association
<b>AGEP</b>	Advanced Glycosylation end-products
<b>Albumin index</b>	Urinary albumin to creatinine ratio
<b>ALP</b>	Alkaline Phosphatase
<b>ARBs</b>	Angiotensin receptor blockers
<b>AT II</b>	Angiotensin II
<b>ATR 1</b>	Angiotensin type 1 receptor
<b>ATR 2</b>	Angiotensin type 2 receptor
<b>β2MG</b>	Beta-2-microglobulin
<b>CAPD</b>	Continuous ambulatory peritoneal dialysis
<b>Cu<sup>2+</sup></b>	Copper
<b>DAG</b>	Diacylglycerol
<b>DCCT</b>	The Diabetes Control and Complication Trial
<b>DM</b>	Diabetes mellitus
<b>DN</b>	Diabetic nephropathy
<b>ECD</b>	Endothelial cell dysfunction
<b>ECM</b>	Extracellular matrix
<b>eNOS</b>	Endothelial nitric oxide synthase
<b>ESRD</b>	End-stage renal disease
<b>ET-1</b>	Endothelin-1



<b>FPG</b>	Fasting plasma glucose
<b>GBM</b>	Glomerular basement membrane
<b>GFR</b>	Glomerular filtration rate
<b>GGT</b>	Gamma-Glutamyltranspeptidase
<b>GH</b>	Growth hormone
<b>HbA<sub>1c</sub></b>	Glycated hemoglobin
<b>hIAP</b>	Human intestinal alkaline phosphatase
<b>IDDM</b>	Insulin dependent diabetes mellitus
<b>IFG</b>	Impaired fasting glucose
<b>IGF-1</b>	Insulin-like growth factor-1
<b>IL-6</b>	Interlukin-6
<b>JG cells</b>	Juxtaglomerular cells
<b>MA</b>	Microalbuminuria
<b>Mg<sup>2+</sup></b>	Magnesium
<b>MHC-I</b>	Major histocompatibility complex class I
<b>Mn<sup>2+</sup></b>	Manganese
<b>NAG</b>	N-Acetyl- $\beta$ -glucosaminidase
<b>NAG index</b>	Urinary NAG to creatinine ratio
<b>NDDG</b>	National Diabetes Data Group
<b>NIDDM</b>	Non insulin dependent diabetes mellitus
<b>NO</b>	Nitric oxide
<b>OMIM</b>	Online Mendelian Inheritance in Man
<b>PAI-1</b>	Plasminogen-activated inhibitor
<b>PCT</b>	Proximal convoluted tubules