Mona Maghraby

بسم اللّه الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني

Mona Maghraby

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم باللّه العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

Association of Low-Density Lipoprotein Receptor-Related Protein-5 *(LRP5)* 4037C>T Polymorphism with Nephropathy in Patients with Type 1 Diabetes Mellitus

Thesis

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Norhan Hossam El-deen Ibrahim Ahmed

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List of Abbreviations

Abb.	Full term

A: ..... *Adenine*
AAb: ..... *Autoantibody*
ACR: ..... *Albumin to creatinine ratio*
AD: ..... *Autosomal dominant*
ADA: ..... *American Diabetes Association*
ADP: ..... *Adenosine diphosphate*
ADPKD: ..... *Autosomal dominant polycystic kidney disease*
AGEs: ..... *Advanced glycation end-products*
Ala: ..... *Alanine*
APC: ..... *Antigen presenting cells*
Apo-E: ..... *Apolipoprotein E*
APS I: ..... *Autoimmune polyendocrine syndrome type I*
AR: ..... *Autosomal recessive*
ATP: ..... *Adenosine triphosphate*
BCR: ..... *B cell receptor*
BMD: ..... *Bone mineral density*
BMI: ..... *Body mass index*
BP: ..... *Blood pressure*
C/EBPα: ..... *CCAAT/enhancer binding protein alpha*
C: ..... *Cytosine*
CHE: ..... *Cholesterol esterase*
CHO: ..... *Cholesterol oxidase*
Ck1: ..... *Casein kinase 1*
CKD: ..... *Chronic kidney disease*
CTLA4: ..... *Cytotoxic T lymphocyte-associated protein (CTLA4)*
CVD: ..... *Cardiovascular disease*

List of Abbreviations (Cont...)

Abb.	Full term
CXCL-1:	*Chemokine ligand-1*
DAISY:	*Diabetes Auto Immunity Study in the Young*
DC:	*Dendritic cells*
DKA:	*Diabetic keto-acidosis*
Dkk1:	*Dickkopf-1*
DN:	*Diabetic nephropathy*
DNA:	*Deoxyribonucleic acid*
dNTP:	*Deoxyribonucleotide triphosphate*
DPN:	*Diabetic sensorimotor polyneuropathy*
Dsh:	*Disheveled*
ECL:	*Electrochemiluminescence*
EGF:	*Epidermal growth factor*
eGFR:	*Estimated glomerular filtration rate*
ELISA:	*Enzyme-linked immunosorbent assay*
ELISPOT:	*Enzyme-linked immunosorbent spot assay*
ERBB3:	*Erb-b2 receptor tyrosine kinase 3*
ERK:	*Extracellular signal-regulated kinase*
FBG:	*Fasting blood glucose*
FDR:	*First degree relatives*
FEVR:	*Familial exudative vitreoretinopathy*
FPG:	*Fasting plasma glucose*
fT4:	*Free thyroxine*
FZD:	*Frizzled receptors*
G:	*Guanine*
G6P-DH:	*Glucose-6-phosphate dehydrogenase*
GA:	*Glycated albumin*
GAD-65:	*65- glutamic acid decarboxylase*
GAPDH:	*Glyceraldehyde 3-dehydrogenase*

List of Abbreviations (Cont...)

Abb.	Full term
GK:	*Glycerol kinase*
GLP-1:	*Glucagon-like peptide -1*
Gly:	*Glycine*
GPO:	*Glycerol phosphate oxidase*
GSK3-β:	*Glycogen synthase kinase 3 beta*
GWAS:	*Genome wide association studies*
H_2O_2:	*Hydrogen peroxide*
HbA1C:	*Glycated hemoglobin*
HBM:	*High bone mass*
HDL-C:	*High-density lipoprotein cholesterol*
HK:	*Hexokinase*
HLA:	*Histocompatibility Leukocyte Antigen*
HPLC:	*High-performance liquid affinity chromatography*
IA:	*Insulin antigen*
IA2:	*Insulinoma-associated protein 2*
IDDM:	*Insulin dependent diabetes mellitus*
IDF:	*International Diabetes Federation*
IFG:	*Impaired fasting glucose*
IFH1:	*Interferon induced with helicase C domain 1*
IFN-γ:	*Interferon gamma*
IGT:	*Impaired glucose tolerance*
IL:	*Interleukins*
ILR2-α:	*Interleukin-2 receptor subunit alpha*
INS:	*Insulin gene*
IPEX:	*Polyendocrinopathy enteropathy X-linked syndrome*
IQR:	*Interquartile range*

List of Abbreviations (Cont...)

Abb.	Full term
ISPAD:	*International Society for Pediatric and Adolescent Diabetes*
KLF-15:	*Krüppel-like factor 15*
Krm:	*Kremen*
LC-MS/MS:	*Liquid chromatography-tandem mass spectrometry*
LDL-C:	*Low-density lipoprotein cholesterol*
LDLR:	*Low-density lipoprotein receptors*
LEF:	*Lymphoid enhancer factor*
LRP5:	*Low-density lipoprotein receptor related protein-5*
M:	*Methionine*
MGB:	*Minor groove binder*
MHC:	*Major histocompatibility complex*
Mi-RNA:	*Micro Ribonucleic acid*
n:	*Number*
NAD:	*Nicotinamide adenine dinucleotide*
NDP:	*Norrie disease protein*
OGTT:	*Oral glucose tolerance test*
OPPG:	*Osteoporosis-pseudoglioma syndrome*
PARP:	*Poly- adenosine diphosphate ribose polymerase*
PBMC:	*Peripheral blood mononuclear cells*
PCR:	*Polymerase chain reaction*
PCR-RFLP:	*Polymerase chain reaction-restriction fragment length polymorphism*
PI/C:	*Proinsulin to c-peptide ratio*
PKC:	*Protein kinase C*
POD:	*Peroxidase*

List of Abbreviations (Cont...)

Abb.	Full term
PPARγ:	*Peroxisome proliferator-activated receptor gamma*
PTMs:	*Post-translational modifications*
PTPN22:	*Protein tyrosine phosphatase non-receptor type 22 gene*
RIA:	*Radio-immunoassay,*
RNF43:	*Ring finger 43*
ROS:	*Reactive oxygen species*
RPG:	*Random plasma glucose*
SD:	*Standard deviation*
SlC30A8:	*Solute carrier family 30-member 8*
SNP:	*Single nucleotide polymorphism*
SNPs:	*Single nucleotide polymorphisms*
SP-1:	*Specificity protein 1*
T:	*Thymine*
T1DM:	*Type 1 diabetes mellitus*
T2DM:	*Type 2 diabetes mellitus*
TC:	*Total cholesterol*
TCF:	*T-cell factor*
TCR:	*T cell receptor*
TG:	*Triglycerides*
TNF:	*Tumor necrosis factors*
TPO:	*Thyroid peroxidase antibodies*
Treg cells:	*Regulatory T cells*
TSH:	*Thyroid stimulating hormone*
UBASH3A:	*Ubiquitin associated and SH3 domain-containing A*
V:	*Valine*
VLDL:	*Very-low-density lipoprotein*

List of Abbreviations (Cont...)

Abb.	Full term
WB:	*Wash buffer*
ZNRF3:	*Zinc and ring finger 3*
ZnT8:	*Zinc transporter 8*
β-cells:	*Beta cells*
β-propeller:	*Beta propeller*
χ^2:	*Chi-square test*
%:	*Percentage*
$\bar{x}$:	*Mean*
2hr-PG:	*2-hour post-load plasma glucose*