Effect of statins as anti-inflammatory on atherosclerosis in chronic kidney disease patients guided by $CD4^{+}CD28^{null}$ T cells over duration of six months

Thesis

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List of Abbreviations

Abb.	Full term

2hPP .....2-hour post prandial
2^{ry} .....Secondary
ACE .....Angiotensin converting enzyme
ACR.....Albumin creatinine ratio
AD.....Alzheimer disease
ADMA .....Asymmetric dimethyl arginine
ADP .....Adenosine di-phosphate
AER .....Albumin excretion rate
Ag.....Antigen
AGEs .....Advanced glycated end products
AKI .....Acute kidney injury
ALT .....Alanine transaminase
APC .....Antigen presenting cells
APP.....Amyloid precursor protein
ARB .....Angiotensin 2 receptor blocker
ASA.....Acetyl salicylic acid
AST.....Aspartate transaminase
ATP.....Adenosine tri-phosphate
ATG……Anti-thymocyte globulin
AUC.....Area under curve
BcL-2 .....B cell lymphoma-2
BP .....Blood pressure
BSA.....Bovine serum albumin
Ca.....Calcium
CAD.....Coronary artery disease
CBC .....Complete blood count
CCA-IMT.....Common carotid artery intimal medial thickness
CCR.....Chemokine receptor
CXcR .....Chemokine receptor
CD.....Cluster of differentiation
CDC42.....Cell division control protein 42 homolog
CG.....Cockcroft gault
CIMT.....Carotid intimal media thickness
CKD.....Chronic kidney disease
CKD-EPI.....Chronic kidney disease epidemiology collaboration
CKD-MBD .....Chronic kidney disease mineral bone disease
Cmax .....Peak plasma concentration
Cr.....Chromium

CRP .....C reactive protein
CTLA-4..... Cytotoxic T lymphocyte antigen 4
CV..... Cardiovascular
CVD..... Cardiovascular disease
DC..... Dendritic cells
DDAH..... Dimethyl arginine dimethyl aminohydrolase
DNA..... Deoxyribonucleic acid
DM..... Diabetes mellitus
DTPA..... Diethylene triamine penta-acetic acid
ECs ..... Endothelial cells
EDTA ..... Ethylene diamine tetra-acetic acid
eGFR ..... Estimated glomerular filtration rate
ELISA..... Enzyme linked immunosorbent assay
eNOS..... Endothelial nitric oxide synthase
EPC..... Endothelial progenitor cells
ERK-5..... Extracellular signal regulated kinase-5
ESA..... Erythropoiesis stimulating agent
ESKD..... End stage kidney disease
ESR..... Erythrocyte sedimentation rate
ESRD..... End stage renal disease
ET-1..... Endothelin-1
FBS ..... Fasting blood sugar
FITC ..... Fluorescein isothiocyanate stain
Fox P_3 ..... Fork-head box P3
FPP ..... Farnesyl pyrophosphate
FS..... Fluid stable
GBM..... Glomerular basement membrane
GDP ..... Guanosine diphosphate
GFR ..... Glomerular filtration rate
gp ..... Glycoprotein
GPP..... Geranyl pyrophosphate
GTP ..... Guanosine triphosphate
Hb ..... Hemoglobin
HbA1c..... Glycated Hemoglobin
HDL..... High density lipoprotein
HLA..... Human leucocyte antigen
HMG-co A.....3-hydroxy-3-methyl glutaryl co-enzyme
HR..... Heart rate
HSP..... Heat shock protein
HTN..... Hypertension
Hu .....human
ICAM-1 ..... Intracellular adhesion molecule-1
IFN- γ ..... Interferon gamma
IL ..... Interleukin

INFG.....Interferon gene
INR .....International normalized ratio
JAK.....Janus kinase
JAM.....Junctional adhesion molecule
JNK.....c-Jun-N-terminal kinase
K/DIGO.....Kidney disease improving global outcomes
K/DOQI.....Kidney Disease Outcome Quality Initiative
K^+ .....Serum potassium
KIR .....Killer cell immunoregulatory inhibitory receptor
KLF-2 .....Kruppel like factor-2
Kv .....Potassium voltage gated channel
L.....Ligand
LDL .....low density lipoprotein
LFA-1 .....Leukocyte function associated antigen 1
LM-rev .....Revised Lund Malmo
LVH.....Left ventricular hypertrophy
M.....Mean
MBD .....Mineral bone disease
MCH.....Mean corpuscular hemoglobin
MCHC.....Mean corpuscular hemoglobin concentration
MCP-1 .....Monocyte chemoattractant protein -1
MCV.....Mean corpuscular volume
MDRD .....Modification of diet in renal disease
MEKK-5.....Mitogen activated protein kinase kinases-5
MI .....Myocardial infarction
MIC .....Major histocompatibility complex class I chain related ligand
MMPs.....Matrix metalloproteinases
mRNA.....Messenger ribonucleic acid
MS.....Multiple sclerosis
MTORC-1.....Mammalian target of rapamycin complex-1
Na^+ .....Serum sodium
NADPH .....Nicotinamide adenine dinucleotide phosphate Hydrogen
NF-kB.....Nuclear factor kappa B
NK.....Natural killer cells
NO.....Nitric oxide
NOS .....Nitric oxide synthase
NSAIDs.....Non-steroidal inflammatory drugs
OAT.....Organic ionic transporter
Ox-LDL.....Oxidized low-density lipoprotein
P27KIP-1.....Cyclin dependent kinase inhibitor-1
PAI-1 .....Plasminogen activator inhibitor-1
PBS .....Phosphate buffered saline
PCR .....Protein creatinine ratio
PD-1.....Programmed death 1

PE ..... Phycoerythrin stain
PECAM-1..... Platelet/endothelial cell adhesion molecule-1
PICC..... Peripherally inserted central catheter
PI-3 ..... Phosphoinositide-3
PK-B..... Protein Kinase-B
PLT..... Platelets
PO_2..... Oxygen tension
PONs..... Paraoxonases
PTH ..... Parathyroid hormone
PT ..... Prothrombin time
RA..... Rheumatoid arthritis
RAAS..... Renin angiotensin aldosterone system
RBC ..... Red blood cells
rpm ..... Rate per minute
RRT ..... Renal replacement therapy
Scr..... Serum creatinine
SD ..... Standard deviation
SMCs ..... Smooth muscle cells
STAT ..... Signal transducer and activator of transcription protein
T reg ..... Regulatory T cells
$t_{1/2}$..... Half life
TAG..... Triglycerides
TBRI..... Theodor Bilharz Research Institute
TCR .....T cell receptor
TGFB-1 .....transforming growth factor-beta 1
Th.....T helper cells
TLC ..... Total leucocytes count
TLR ..... Toll like receptor
TNF-α..... Tumor necrosis factor alpha
TSP-1..... Thrombospondin-1
UDP Uridine-5-diphosphate
UGT..... Uridine-5-diphosphate glucuronosyl transferase
US ..... Ultrasound
VCAM-1..... Vascular cell adhesion molecule -1
VLA-4..... Very late antigen-4
WBC..... White blood cells

Introduction