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ABC transporters and scavenger receptor BI : important mediators of lipid metabolism and atherosclerosis

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LIST OF ABBREVIATIONS

36B4	acidic ribosomal phosphoprotein PO
ABC	ATP-binding cassette
ACAT	acyl-CoA:cholesterol acyltransferase
ACEH	acidic cholesteryl ester hydrolase
acLDL	acetylated LDL
ADP	adenosine-5'-diphosphate
ADRP	adipocyte differentiation-related protein
AGE	advanced glycation end
Apo	apolipoproteins
ATGL	adipose triglyceride lipase
ATIR	angiotensin II type I receptor
BasoEB	basophilic erythroblasts
BFU-E	burst-forming unit-erythroid
BLVRA	biliverdin reductase A
BM	bone marrow
BMDM	bone marrow-derived macrophage
BMT	bone marrow transplantation
BSEP	bilit salt pump
CAD	coronary artery disease
CE	cholesteryl esters
CETP	cholesteryl ester transfer protein
CFU-E	colony-forming units-erythrocyte
CFU-S	colony-forming units spleen
Cide	cell death inducing DFFA-like effector
CM	chylomicrons
COX-I	cyclooxygenase-I
EL	Endothelial lipase
eNOS	endothelial NO synthase
EPOr	erythropoietin receptor
FC	free cholesterol
FECH	ferrochelataase
FFA	free fatty acids
FOG-I	friend of GATA-I
FXR	farnesoid X receptor
GATA-I	globin transcription factor I
HDL	high-density lipoprotein
HDL-C	HDL cholesterol
HE	hematoxylin and eosin
HF/HC	high-fat, high-cholesterol
HGB	hemoglobin content
HL	hepatic lipase
HMGCR	3-hydroxy-3-methyl-glutaryl-CoA reductase

HO-1	hemeoxygenase
HPRT	hypoxanthine-guanine phosphoribosyl transferase
HSL	hormone-sensitive lipase
ICAM-1	vascular cell adhesion molecule-1
IDL	intermediate-density lipoprotein
IHD	ischemic heart disease
JAK2	Janus kinase 2
LCAT	lecithin:cholesterol acyltransferase
LDL	low-density lipoprotein
LDLr	low-density lipoprotein receptor
LOX-1	lectin-like oxidized low-density lipoprotein receptor-1
LPL	lipoprotein lipase
LPS	lipopolysaccharide
LRP	LDLr-related protein
LXR	liver X receptor
MCH	mean cellular hemoglobin content
MCHC	mean cellular haemoglobin concentration
M-CSF	macrophage colony-stimulating factor
MDRI	multidrug transporter 1
MPV	mean platelet volume
MTP	microsomal triglyceride transfer protein
NBF	nucleotide binding folds
NO	nitric oxide
OrthoEB	orthochromatic erythroblasts
PAF-AH	platelet activating factor acetylhydrolase
PE	phycoerythrin
PGI ₂	prostacyclin
PHSC	pluripotent hematopoietic stem cell
PL	phospholipid
Plin	perilipin
PLTP	phospholipid transfer protein
PM	peritoneal macrophage
PMA	phorbol myristate 13-acetate
PolyEB	polychromatic erythroblasts
PON-1	paraoxonase-1
PPAR	peroxisome proliferator activated receptors
ProEB	proerythroblasts
RBC	red blood cells
RCT	reverse cholesterol transport
Ret	reticulocytes
RXR	retinoid X receptor
SAA	serum amyloid A
SCDI	stearoyl-CoA desaturase-1
SR-A	scavenger receptor A

Abbreviations

SR-BI	scavenger receptor class B type I
SREBP	sterol regulatory binding protein
TAL-1	basic helix-loop-helix factor
TC	total cholesterol
TD	Tangier disease
Tg	transgenic
TG	triglyceride
TLR4	Toll-like receptor 4
TM	transmembrane
TNF- α	tumor necrosis factor- α
TTO	total arterial occlusion
TUNEL	terminal deoxynucleotidyl transferase-mediated dUTP nick end-labeling
TxA ₂	thromboxane A ₂
TxB ₂	2,3-dinor thromboxane B ₂
UC	unesterified cholesterol
VCAM-1	vascular cell adhesion molecule-1
VLDL	very-low-density lipoprotein
VLDLr	very low-density lipoprotein receptor
WT	wild type
WTD	Western-type diet

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CURRICULUM VITAE

Illiana Meurs werd op 28 januari 1981 geboren te 's-Gravenhage. In 1999 behaalde zij haar VWO diploma aan het Gymnasium Haganum te 's-Gravenhage. In datzelfde jaar begon zij met de studie Bio-farmaceutische Wetenschappen aan de Universiteit Leiden, waar zij in 2000 het propedeutisch examen behaalde. Van oktober 2002 tot en met november 2003 werd in het kader van de hoofdvakstage onderzoek verricht binnen de vakgroep Biofarmacie van het Leiden/Amsterdam Center for Drug Research onder begeleiding van dr. M. van Eck en prof. dr. Th.J.C. van Berkel. Zij ontving voor dit onderzoek, getiteld "Essential role for scavenger receptor BI in erythrocyte catabolism and prevention of thrombosis" de Suzanne Hovinga prijs voor de beste wetenschappelijke stage in Leiden. In 2003 won zij de KNMP prijs voor beste doctoraal student van het jaar in Leiden. Tevens deed zij als student een onderzoekstage bij de vakgroep Sexual Health van Pfizer te Sandwich, Engeland onder begeleiding van dr. M. Jackson. In 2005 behaalde zij aan de Universiteit Leiden het doctoraal examen Bio-farmaceutische Wetenschappen (*cum laude*). Van september 2005 tot december 2009 werd als assistent in opleiding het in dit proefschrift beschreven onderzoek uitgevoerd bij de vakgroep Biofarmacie onder leiding van dr. M. Van Eck en prof. dr. Th.J.C van Berkel. Sinds juni 2010 is zij aangesteld als post-doctoraal onderzoeker bij de afdeling Endocrinologie en Metabole Ziekten van het Leids Universitair Medisch Centrum te Leiden.