

**Phospholipase Lipoprotein-associated
A2 and relation to premature
atherosclerosis in β -thalassemia
children**

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

لسببائك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

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List of Abbreviations

<i>Abb.</i>	<i>Full term</i>
Δ	<i>Delta</i>
μg	<i>Microgram</i>
μl	<i>Microliter</i>
$^{\circ}\text{C}$	<i>Centigrade</i>
α	<i>Alpha</i>
β -Thal	<i>Beta Thalassemia</i>
γ	<i>Gamma</i>
25K Da	<i>25 Kilodalton</i>
3D	<i>3 Dimensions</i>
8-epiPGF _{2a}	<i>8-isoprostane</i>
AHSP	<i>Ahemoglobin Stabilizing Protein</i>
AIP	<i>Atherogenic Index of Plasma</i>
AKI	<i>Acute Kidney Injury</i>
AL	<i>Anetrrior Lateral</i>
ALT	<i>Alanine Aminotransferase</i>
Apo-B	<i>Apolipoprotein B</i>
ARIC	<i>Atherosclerosis Risk in Communities</i>
AST	<i>Aspartate Aminotransferase</i>
BMI	<i>Body Mass Index</i>
BP	<i>Blood Pressure</i>
Bp	<i>Deltion</i>
Ca	<i>Calcium</i>
CAD	<i>Coronary Artery Disease</i>
CBC	<i>Complete Blood Count</i>
CCA	<i>Common Carotid Artery</i>
CCS	<i>Coronary Calcium Score</i>
CHAPS	<i>3-cholamidopropyl dimethylammonio-1-propanesulfonate</i>
CHOL	<i>Cholesterol</i>

List of Abbreviations (Cont...)

Abb.	Full term
<i>CHS</i>	<i>Cardiovascular Health Study</i>
<i>CIMT</i>	<i>Carotid Intima Media Thickness</i>
<i>cm</i>	<i>Centimeter</i>
<i>CMR</i>	<i>Cardiac Magnetic Resonance</i>
<i>CT</i>	<i>Computerize Tomography</i>
<i>CVD</i>	<i>Cardiovascular Disease</i>
<i>D. Bilirubin</i>	<i>Direct Bilirubin</i>
<i>DE-52</i>	<i>Dielectrophoresis-52</i>
<i>DFO</i>	<i>Deferoxamin</i>
<i>DFP</i>	<i>Deferiprone</i>
<i>DFX</i>	<i>Deferasirox</i>
<i>DNA</i>	<i>Deoxyribonucleic Acid</i>
<i>ECG</i>	<i>Electrocardiogram</i>
<i>ECL</i>	<i>Enhanced chemiluminescent</i>
<i>EDTA</i>	<i>Ethylenediaminetetraacetic Acid</i>
<i>ELIZA</i>	<i>Enzyme like Immunosorbent Assay</i>
<i>EMH</i>	<i>Extramedullary Hematopoiesis</i>
<i>FA</i>	<i>Fatty Acids</i>
<i>FDA</i>	<i>Food and Drug Administration</i>
<i>Fig</i>	<i>Figure</i>
<i>FL</i>	<i>Femtoliter</i>
<i>FMD</i>	<i>Flow-Mediated Dilatation</i>
<i>FRS</i>	<i>Framingham Risk Score</i>
<i>g/dl</i>	<i>gram per deciliter</i>
<i>GDF15</i>	<i>Growth Differentiation Factor 15</i>
<i>GFR</i>	<i>Glomerular Filtration Rate</i>
<i>GH</i>	<i>Growth Hormone</i>
<i>Hb A2</i>	<i>Hemoglobin A2</i>
<i>Hb F</i>	<i>Fetal H Hemoglobin</i>

List of Abbreviations (Cont...)

Abb.	Full term
<i>Hb</i>	<i>Hemoglobin</i>
<i>HbA</i>	<i>Hemoglobin A</i>
<i>HbC</i>	<i>Hemoglobin C</i>
<i>HbE</i>	<i>Hemoglobin E</i>
<i>HbH</i>	<i>Hemoglobin H</i>
<i>HbS</i>	<i>Hemoglobin S</i>
<i>HCT</i>	<i>Hematocrit</i>
<i>HCV</i>	<i>Hepatitis C Virus</i>
<i>HDL</i>	<i>High Density Lipoprotein</i>
<i>HDL-C</i>	<i>High Density Lipoprotein Cholesterol</i>
<i>HEPES</i>	<i>4-(2-hydroxyethyl)-1 Piperazineethanesulfonic Acid</i>
<i>HGB</i>	<i>Hemoglobin</i>
<i>HIV</i>	<i>Human Immunodeficiency Virus</i>
<i>HLA</i>	<i>Human Leukocyte Antigen</i>
<i>HPFH</i>	<i>Hereditary Persistence of Fetal Hemoglobin</i>
<i>HPLC</i>	<i>High Performance Liquid Chromatography</i>
<i>hr</i>	<i>Hour</i>
<i>HR</i>	<i>Heart Rate</i>
<i>HRP</i>	<i>Horseradish Peroxidase</i>
<i>HS</i>	<i>Highly Significant</i>
<i>Ht</i>	<i>Height</i>
<i>Ia</i>	<i>Intracellular a</i>
<i>ICA</i>	<i>Internal Carotid Artery</i>
<i>IDDM</i>	<i>Insulin Dependent Diabetes</i>
<i>IE</i>	<i>Ineffective Erythropoiesis</i>
<i>IGT</i>	<i>Impaired Glucose Tolerance</i>
<i>IMT</i>	<i>Intima-media Thickness</i>
<i>IQR</i>	<i>Interquartil Range</i>

List of Abbreviations (Cont...)

Abb.	Full term
<i>IU/L</i>	<i>International Unit per liter</i>
<i>IVS</i>	<i>intervening sequence</i>
<i>kDa</i>	<i>Kilodalton</i>
<i>kg</i>	<i>Kilogram</i>
<i>kg/m²</i>	<i>Kilgram per Miter Square</i>
<i>L</i>	<i>Liter</i>
<i>LC-MS/MS</i>	<i>Lipoprotein lipase Concentration- Mass Spectrometry</i>
<i>LDL</i>	<i>Light Density Lipoprotein</i>
<i>LDL-C</i>	<i>Light Density Lipoprotein- Cholesterol</i>
<i>LPI</i>	<i>Labil Plasma Iron</i>
<i>Lp-PLA2</i>	<i>Lipoprotein-Associated Phospholipase A2</i>
<i>LV</i>	<i>Left Ventricler</i>
<i>Lyso PC</i>	<i>Lyso Phosphatidyl choline</i>
<i>MCH</i>	<i>Mean Corpusculare Hemoglobin</i>
<i>MCS-R</i>	<i>Mutation in Critical- Region</i>
<i>MCV</i>	<i>Mean Corpusculare Volum</i>
<i>mg/g</i>	<i>Mille gram per gram</i>
<i>mg/dl</i>	<i>Mille gram per deciliters</i>
<i>mg/kg/day</i>	<i>Mille gram per kilogram per day</i>
<i>MHz</i>	<i>Mega Hertiz</i>
<i>MI</i>	<i>Myocardial Infarction</i>
<i>ml/min</i>	<i>Mille liter per minute</i>
<i>mm</i>	<i>Milli meter per Liter</i>
<i>mmol/L</i>	<i>Mili mol</i>
<i>MRI</i>	<i>Magnetic Resonance Imaging</i>
<i>mRNA</i>	<i>Messenger Ribonucleic Acid</i>
<i>n</i>	<i>Number</i>
<i>NaCl</i>	<i>Sodium Chlorid</i>