

**Serum and Urinary Nitrites and Nitrates  
and Doppler Sonography in Children and  
Adolescents with Type 1 Diabetes Mellitus**

*Thesis*

*Submitted for partial fulfillment of master degree in  
pediatrics.*

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## **Abbreviations**

**AAT:** Alpha one Antitrypsin.

**ACE:** Angiotensin Converting Enzyme.

**ADA:** American Diabetes Association.

**AER:** Albumin Excretion Rate.

**AGE:** Advanced Glycation End product.

**ARB:** Angiotensin Receptor Blocker.

**BCG:** Bacillus, Colmette- Guerin.

**BM:** Basement Membrane.

**BMI:** Body Mass Index.

**BP:** Blood Pressure.

**CSI:** Continuous Subcutaneous Insulin infusion.

**DBP :** diastolic blood pressure

**DCCT:** Diabetes Control and Complications Trial.

**DKA:** Diabetes Keto Acidosis.

**DM:** Diabetes Mellitus.

**DN:** Diabetic Nephropathy.

**DPT's:** Diabetes Prevention Trials.

**eNOS:** endothelial Nitric Oxide Synthase.

**ESRD:** End Stage Renal Disease.

**GAD:** Glutamic Acid Decarboxylase.



## *Abbreviations*

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**GBM:** Glomerular Basement Membrane.

**GDM:** Gestational Diabetes Mellitus.

**GFR:** Glomerular Filtration Rate.

**GLA:** Gamma Linolenic Acid.

**Hb:** Hemoglobin.

**Hb<sub>A1C</sub>:** glycated hemoglobin.

**HIF:** Hypoxia Inducible Factor.

**HLA:** Human Leucocyte Antigen.

**IA:** Insulin Auto antibodies.

**ICA:** Islet Cell Antibodies.

**IDDM:** Insulin Dependent Diabetes Mellitus.

**iNOS:** inducible Nitric Oxide Synthase.

**ISPAD:** International Society for Pediatric and Adolescent Diabetes.

**Micro-HOPE:** Microalbuminuria Heart Outcomes Prevention Evaluation.

**MRI:** Mean Resistive Index.

**NKA:** Sodium Potassium ATPase.

**nNOS:** neuronal Nitric Oxide Synthase.

**NO:** Nitric Oxide.

**NO<sub>2</sub>:** Nitrite.

**NO<sub>3</sub>:** Nitrate.

**NOS:** Nitric Oxide Synthase.

**NPV:** Negative Predictive Value.

## *Abbreviations*

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**PPV:** Positive Predictive Value.

**RAS:** Renin Angiotensin System.

**RAVV:** Recombinant Adeno-associated Virus Vector.

**RI:** Resistive Index.

**ROC-curve:** Receiver Operating Characteristic curve.

**SBP :** systolic blood pressure

**SMBG:** Self Monitoring of Blood Glucose.

**TGFB:** Transforming Growth Factor Beta.

**Zn:** Zinc.

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