DECLARATION

I, R. Balamurugan hereby declare that this thesis entitled “Antidiabetic Activity of Lippia nodiflora L – A medicinal plant” is a record of independent research work done by me during the period of study under the supervision and guidance of Dr. S. Ignacimuthu, s.j., Director, Entomology Research Institute, Loyola College, Chennai- 600034.

October 8, 2012

R. Balamurugan

Chennai (Candidate)
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# GLOSSARY OF ABBREVIATION

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<th>Abbreviation</th>
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<tr>
<td>ALP</td>
<td>Alkaline phosphatase</td>
</tr>
<tr>
<td>ALT</td>
<td>Alanine aminotransferase</td>
</tr>
<tr>
<td>ANOV</td>
<td>Analysis of variance</td>
</tr>
<tr>
<td>ANSA</td>
<td>Aminonaphthol Sulphonic acid</td>
</tr>
<tr>
<td>AST</td>
<td>Aspartate aminotransferase</td>
</tr>
<tr>
<td>ACP</td>
<td>Acid phosphatase</td>
</tr>
<tr>
<td>ABC</td>
<td>ATP- binding cassette</td>
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<tr>
<td>b.w</td>
<td>Body weight</td>
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<tr>
<td>BGL</td>
<td>Blood Glucose Level</td>
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<tr>
<td>CAT</td>
<td>Catalase</td>
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<tr>
<td>CAD</td>
<td>Coronary Artery Disease</td>
</tr>
<tr>
<td>CHD</td>
<td>Coronary heart disease</td>
</tr>
<tr>
<td>DMSO</td>
<td>Dimethyl sulfoxide</td>
</tr>
<tr>
<td>DTNB</td>
<td>Dithionitroso bisbenzoic acid</td>
</tr>
<tr>
<td>DNPH</td>
<td>Dinitrophenylhydrazine</td>
</tr>
<tr>
<td>DPA</td>
<td>Diphenylamine</td>
</tr>
<tr>
<td>DEE</td>
<td>Diethyl Ether</td>
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<tr>
<td>EDTA</td>
<td>Ethylenediaminetetraacetic acid</td>
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<tr>
<td>ED</td>
<td>Effective Dose</td>
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<tr>
<td>ELISA</td>
<td>Enzyme-linked immunosorbent assay</td>
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<tr>
<td>FFA</td>
<td>Free fatty acid</td>
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<tr>
<td>FPG</td>
<td>Fasting Plasma Glucose</td>
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<tr>
<td>GSH-Px</td>
<td>glutathione peroxidase</td>
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<tr>
<td>GSH</td>
<td>Reduced glutathione</td>
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<td>Abbreviation</td>
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<tr>
<td>GC-MS</td>
<td>Gas chromatography Mass Spectra</td>
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<tr>
<td>H₂O₂</td>
<td>Hydrogen peroxide</td>
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<tr>
<td>Hb</td>
<td>Hemoglobin</td>
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<tr>
<td>HbA₁C</td>
<td>Glycosylated haemoglobin</td>
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<tr>
<td>HDL-C</td>
<td>High Density Lipoprotein Cholesterol</td>
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<tr>
<td>HPLC</td>
<td>High Performance Liquid Chromatography</td>
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<tr>
<td>HP</td>
<td>Lipid hydroperoxides</td>
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<tr>
<td>IDDM</td>
<td>Insulin Dependent Diabetes Mellitus</td>
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<tr>
<td>IU</td>
<td>International unit</td>
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<tr>
<td>IDF</td>
<td>International Diabetes Federation</td>
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<tr>
<td>IGT</td>
<td>Impaired Glucose Tolerance</td>
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<tr>
<td>IFG</td>
<td>Impaired Fasting Glucose</td>
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<tr>
<td>IR</td>
<td>Infra Red</td>
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<tr>
<td>LDL-C</td>
<td>Low Density Lipoprotein Cholesterol</td>
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<td>LPO</td>
<td>Lipid peroxidation</td>
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<tr>
<td>LD</td>
<td>Lethal Dose</td>
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<tr>
<td>MASS</td>
<td>Mass spectroscopy</td>
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<tr>
<td>MgCl₂</td>
<td>Magnesium chloride</td>
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<tr>
<td>MRP-1</td>
<td>Human multidrug resistance protein 1</td>
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<tr>
<td>(NAD)</td>
<td>Nicotinamide adenine dinucleotide</td>
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<tr>
<td>NADH</td>
<td>Reduced Nicotinamide adenine dinucleotide</td>
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<tr>
<td>NBT</td>
<td>Nitroblue tetrazolium</td>
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<tr>
<td>NIDM</td>
<td>Non-insulin dependent diabetes mellitus</td>
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<tr>
<td>NMR</td>
<td>Nuclear magnetic resonance.</td>
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<td>NGS</td>
<td>Normal goat serum</td>
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O₂*: Superoxide radical
OH*: Hydroxyl radical
OGTT: Oral Glucose Tolerance Test
PBS: Phosphate Buffer Solution
PL: Phospholipids
PMS: Phenazine methosulphite
ROS: Reactive Oxygen Demand
SD: Standard Deviation
SOD: Superoxide Dismutase
Na₂CO₃: Sodium bicarbonate
H₂SO₄: Sulphuric Acid
NaOH: Sodium carbonate
SPSS: Statistical Package for Social Sciences
STZ: Streptozotocin
TBARS: Thiobarbituric acetic acid
TC: Total Cholesterol
TG: Triglycerides
TLC: Thin Layer Chromatography
TEA: Triethanolamine
UDP: Uridine Diphosphate
VCCLAB: Virtual Computational Chemistry Laboratory
VLDL-C: Very Low Density Lipoprotein cholesterol
WHO: World Health Organization
DEDICATED TO MY BELOVED PARENTS
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<td>Experimental design and treatment schedule</td>
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  Separation of serum
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  Estimation of glycogen
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SUMMARY AND CONCLUSION

PUBLISHED PAPERS
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