DECLARATION

I hereby declare that the research work entitled “Studies on the hypoglycemic, hypolipidemic and antioxidant properties of *Pithecellobium dulce* Benth. fruit extract studied in Streptozotocin induced diabetic rats” has been originally conducted by me under the guidance and supervision of Dr. V. KAVIYARASAN, Associate Professor, CAS In Botany, University of Madras, Guindy Campus, Chennai - 600 025, India and this work has not been submitted elsewhere for any other degree. I hereby assure that no part of this thesis will be published without the consent of the research guide.

Station: Chennai - 25

(S. PRADEEPA)
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S. PRADEEPA
Dedicated
To my
Beloved
Elder brother
Late S. Sankaranarayanan
α - Alpha
β - Beta
γ - Gamma
μg - Microgram
μmoles - Micromoles
ADA - American Diabetes Association
ADP - Adenosine diphosphate
AGEs - Advanced glycosylation end-products
ALP - Alkaline phosphatase
ALT - Alanine transaminases
AMP - Adenosine monophosphate
ANOVA - Analysis of variance
ANSA - Amino Naphthol Sulphonic acid
AST - Aspartate transaminase
ATP - Adenosine triphosphate
ATPase - Adenosine triphosphatase
b.w - Body weight
BSA - Bovine Serum Albumin
Ca^{2+} - Calcium ion
cAMP - Cyclic adenosine monophosphate
CAT - Catalase
CDNB - 1-chloro-2,4-dinitro benzene
CO_{2} - Carbon dioxide
C-peptide - Connecting peptide
DM - Diabetes mellitus
DMSO - Dimethyl Sulphoxide
DNA - Deoxy ribonucleic acid
DNPH - 2,4-Dinitrophenylhydrazine
DPP - Dipeptidyl Peptidase
EDTA - Ethylene diamine tetra acetic acid
FBG - Fasting Blood glucose
g - Gram(s)
G6PDH - Glucose-6-phosphate dehydrogenase
GAD - Glutamic Acid Decarboxylase
GAPDH - Glyceraldehyde-3-phosphate dehydrogenase
GDM - Gestational diabetes mellitus
GGT - Gamma glutamyl transpeptidase
GIP - Glucose dependant Insulinotropic polypeptide
GK - Glucokinase
GLP - Glucagon-like peptide
nmoles - Nanomoles
OD - Optical density
OGTT - Oral glucose tolerance test
Ox-LDL - Oxidised Low Density Lipoprotein
PBS - Phosphate buffered saline
PDH - Pyruvate dehydrogenase
PEP - Phospho enol pyruvate
PEPCK - Phosphoenolpyruvate dehydrogenase
pH - Potential of hydrogen ion
pi - Inorganic phosphorus
PI3K - Phosphatidylinositol-3-kinase
PIP - Phosphatidyl Inositol Triphosphate
PK - Pyruvate kinase
PKB - Protein kinase B
PKC - Protein kinase C
RBC - Red blood cells
ROS - Reactive oxygen species
rpm - Revolution per minute
S.E.M - Standard error of mean
SDH - Sorbitol dehydrogenase
SDS - Sodium Do Decyl Sulphate
Sec - Second(s)
SOD - Superoxide dismutase
STZ - Streptozotocin
T1DM - Type 1 diabetes mellitus
T2DM - Type 2 diabetes mellitus
TBA - Thiobarbituric acid
TBARS - Thiobarbituric acid reactive substances
TCA - Trichloroacetic acid
TG - Triacylglycerols
v/v - volume/volume
VLDL - Very low density lipoprotein
w/v - weight/volume
WBC - White blood cell
WHO - World Health Organization
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Introduction</td>
<td>1</td>
</tr>
<tr>
<td>2. Scope of the present investigation</td>
<td>12</td>
</tr>
<tr>
<td>3. Evaluation of hypoglycemic, hypolipidemic and antioxidant properties of <em>Pithecellobium dulce</em> pod pulp extract</td>
<td>16</td>
</tr>
<tr>
<td>4. Evaluation of antimicrobial properties of <em>Pithecellobium dulce</em> pod pulp extract</td>
<td>147</td>
</tr>
<tr>
<td>5. Summary and Conclusion</td>
<td>173</td>
</tr>
</tbody>
</table>

List of Research Publications