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DECLARATION

I declare that the thesis entitled “Pharmacognostic and Bioactivity Studies of the ‘Egyptian Pea’, Sesbania sesban (L.) Merr.” submitted by me for the degree of Doctor of Philosophy (Ph.D.,) is the record of research work carried out by me during the period from March 2009 to July 2014 under the guidance of Dr. R. Ravindhran, Associate Professor and Research Supervisor, Department of Plant Biology and Biotechnology, Loyola College (Autonomous), Chennai- 600 034, Tamil Nadu, and has not formed the basis for the award of any Degree, Diploma, Associateship, Fellowship, Titles in this University or any other University or other similar Institution of higher learning.

(T. Mythili)
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LIST OF ABBREVIATIONS

A-431       Human skin cancer epidermoid carcinoma
AOS         Active Oxygen Species
ATCC        American Type Culture Collection
BLAST       Basic Local Alignment Search Tool
CAMP        Cyclic Adenosine MonoPhosphate
CFU         Colony-Forming Unit
DMEM        Dulbecco's Modified Eagle's medium
DPPH        1,1-diphenyl-2-picryl hydrazyl
EDAX        Energy Dispersive X-ray
EDTA        Ethylenediaminetetraacetic acid
EF          Extraction Factor
EMR         Electromagnetic Radiation
FAA         Formalin Aceto-Alcohol
FTIR        Fourier Transform Infrared
GC-MS       Gas Chromatography Mass Spectrometry
H2SO4       Sulphuric acid
HCl         Hydrochloric acid
HPLC        High Performance Liquid Chromatography
HPTLC       High performance thin layer chromatography
HT-29       Human colorectal adenocarcinoma
IC50        Half-Maximal Inhibitory Concentration
IKI         Iodine Potassium Iodide
ITS         Internal Transcribed Spacers
IUCN        International Union for Conservation of Nature and natural resources
K3Fe(CN)6   Potassium ferricyanide
KBr         Potassium bromide
LC-MS       Liquid Chromatography Mass Spectrometry
LD50        Half-Maximal Lethal dose concentration
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<tr>
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<td>LOD</td>
<td>Limit of detection</td>
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<td>LPS</td>
<td>Lipopolysaccharide</td>
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<td>MS</td>
<td>Mass-Spectroscopy</td>
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<tr>
<td>MTCC</td>
<td>Microbial Type Culture Collections</td>
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<tr>
<td>MTT</td>
<td>3-(4,5-dimethyl thiazol-2-yl)-2,5-diphenyl tetrazolium bromide</td>
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<td>NBT</td>
<td>NitroBlue Tetrazolium</td>
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<td>NCBI</td>
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<td>NCCS</td>
<td>National Centre for Cell Science</td>
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<tr>
<td>NEDD</td>
<td>Naphthylethylene Diamine Dihydrochloride</td>
</tr>
<tr>
<td>NIST</td>
<td>National Institute of Standards and Technology</td>
</tr>
<tr>
<td>NMR</td>
<td>Nuclear Magnetic Resonance</td>
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<td>NTS</td>
<td>Non-Transcribed Spacer</td>
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<tr>
<td>rbcL</td>
<td>Ribulose- 1,5-bisphosphate carboxylase / oxygenase chloroplast gene</td>
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<tr>
<td>rDNA</td>
<td>Ribosomal DNA</td>
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<tr>
<td>Rf</td>
<td>Retention factor</td>
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<tr>
<td>ROS</td>
<td>Reactive Oxygen Species</td>
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<td>rRNA</td>
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<tr>
<td>RUBISCO</td>
<td>Ribulose- 1,5-Bisphosphate carboxylase / oxygenase</td>
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<tr>
<td>SEM</td>
<td>Scanning electron microscopy</td>
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<td>STZ</td>
<td>Streptozotocin</td>
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<td>TBA</td>
<td>tert-butyl alcohol</td>
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<td>TLC</td>
<td>Thin layer chromatography</td>
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<tr>
<td>Tris-HCl</td>
<td>Tris(hydroxymethyl)aminomethane hydrochloride</td>
</tr>
<tr>
<td>UV-Vis</td>
<td>Ultra Violet Visible light</td>
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<td>WHO</td>
<td>World Health Organization</td>
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