Certificate

I certify that the thesis entitled **"Enhancing *Invitro* Propagation Efficiency and Exploring Wound Healing Therapeutic Potential of *Rauvolfia tetraphylla* L.: A Multifaceted Approach"** submitted to Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for the award of the Degree of Doctor of Philosophy (Ph.D.) in Botany, is a record of original work done by Miss. Lavanya N, during the period from June 2019 to December 2024 in Department of Botany, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, under my guidance and supervision and the thesis has not formed on the basis for the award of any Degree, Diploma, Associateships, Fellowship, or similar Thesis to any canditate in this University or any other University or Institution of Higher Learning.

28/10/2024
Signature of the Supervisor

28/10/24
Signature of Head of Department

28/10/2024
Signature of the Dean

Declaration

I declare that the thesis entitled "**Enhancing *In vitro* Propagation Efficiency and Exploring Wound Healing Therapeutic Potential of *Rauvolfia tetraphylla* L.: A Multifaceted Approach**" submitted by me for the Degree of Doctor of Philosophy (Ph.D) by Ms. Lavanya N in Department of Botany, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore is the record of research work carried out by her during the period from June 2019 to June 2024 under the guidance of **Dr. S. Amutha M.Sc., M.Phil., Ph.D.**, Assistance Professor and this work has not formed on the basis for the award of any Degree, Diploma, Associateships, Fellowship or other Thesis in this University or any other University or Institution of Higher Learning.

28/10/24

Signature of Candidate

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Signature of the Supervisor

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Abbreviations

H_2SO_4	- Sulfuric acid
MS medium	- Murashige and Skoog medium
HCl	- Hydrogen Chloride
NaOH	- Sodium hydroxide
$(NH_4)\ No_3$	- Ammonium nitrate
KNo_3	- Potassium Nitrate
$CaCl_2.2H_2O$	- Calcium chloride
$MgSo_4.7H_2O$	- Magnesium sulphate heptahydrate
KH_2PO_4	- Potassium dihydrogen phosphate
$MnSo_4.4H_2O$	- Manganese(II) sulphate tetrahydrate
$ZnSo_4.7H_2O$	- Zinc sulphate heptahydrate
H_3Bo_3	- Boric acid
$Na_2\ MoO_4.4H_2O$	- Sodium molybdate tetrahydrate
$CuSo_4.5H_2O$	- Copper(II) sulphate pentahydrate
$CoCl_2.6H_2O$	- Cobalt(II) chloride
KI	- Potassium Iodide
Na_2 EDTA	- Ethylenediaminetetraacetic acid disodium salt dihydrate
$FeSo_4.7H_2O$	- Ferrous sulphate heptahydrate
2,4-D	- 2,4-dichlorophenoxyacetic acid
IAA	- Indole -3- acetic acid
IBA	- Indole-3- butyric acid
BAP	- Benzyl adenine
KIN	- Kinetin
$HgCl_2$	- Mercuric chloride

LAF	- Laminar airflow cabinet
PGRs	- Plant growth regulators
ANOVA	- Analysis of variance
FC reagent	- Folin Ciocalteau reagent
TLC	- Thin Layer Chromatography
GCMS	- Gas Chromatography Mass Spectrometry
LCMS	- Liquid Chromatography-Mass Spectrometry
R_f values	- Retardation factors
FTIR	- Fourier-transform infrared spectroscopy
NMR	- Nuclear magnetic resonance (NMR) spectroscopy
MTCC	- Microbial Type Culture Collection
MIC	- Minimum Inhibitory Concentration
DPPH	- 1,1-Diphenyl-2-picrylhydrazyl
FRAP	- Ferric Reducing Antioxidant Power (FRAP) assay
MTT	- 3-(4,5-dimethythiazol-2-yl)-2,5-diphenyl tertazolium bromide
MEM	- Minimum Essential Medium
CCM	- Chick Chorioallantoic Membrane
TDC	- Tryptophan decarboxylase
PDB	- Protein databank