

Department of Biotechnology Hargobind Khurana School of Life Sciences Assam University, Silchar (A Central University constituted under Act XIII of 1989) Silchar- 788 011, Assam, India

DECLARATION

I, Yumnam Romila Devi, hereby declare that the thesis entitled "ISOLATION AND CHARACTERIZATION OF ANTI-DIABETIC COMPOUND(S) FROM Eugenia operculata Roxb." submitted to Assam University, Silchar for the degree of Doctor of Philosophy (Ph.D) is the findings of my own research work carried out under the joint supervision of Dr. P.B. Mazumder and Dr. Y.Vasudeva. Rao. The results presented here have not been previously submitted to any University or Institution for any degree, diploma, and associate fellowship whatsoever.

Date: 14/8/14

Place: Silchar

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Yumnam Romila Devi

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LIST OF ABBREVIATIONS

μg Micro gram
 μl Micro liter
 ⁰C Degree Celsius
 E.operculata Eugenia operculata

hr Hour

DMSO Dimethyl sulphoxide w/v Weight/volume

Min Minute

DPPH Diphenylpicrylhydrazyl

mM Milimolar Mililiter Ml M Molar nm Nanometer Optical density O.D u/ml Unit/mililitre mg Miligram Kg Kilogram b/wBody weight STZ Streptozotocin

rpm Revolution per minute
ATP Adenosine tri phosphate
ADP Adenosine di phosphate

dl Deciliter

VLDL Very low density lipoprotein
LDL Low density lipoprotein
HDL High density lipoprotein

HDLc High density lipoprotein cholesterol

OsO₄ Osmium tetroxide PBS Phosphate buffer saline

gm Gram

 $\begin{array}{ll} TCA & Trichloroacetic acid \\ IC & Inhibitory concentration \\ GAE & Gallic acid equivalent \\ H_2SO_4 & Sulphuric acid \\ Hcl & Hydrochloric acid \end{array}$

TLC Thin layer chromatography NMR Nuclear magnetic resonance

ppm Parts per million

T2DM Type 2 Diabetes Mellitus