



**DEPARTMENT OF ZOOLOGY**  
**BODOLAND UNIVERSITY**  
Debargaon, P.O. - Rangalikhata  
Kokrajhar – 783 370, BTAD, Assam

**Dr. Ananta Swargiary, M.Sc., Ph.D.**  
Assistant Professor

Ph. No.: +91-8638137477  
Email: ananbuzoo101@gmail.com

## **CERTIFICATE**

This is to certify that the thesis entitled “**Study of anti-hyperglycemic property of traditionally used medicinal plants of Kokrajhar district, Assam**” submitted by Manita Daimari (Date of Registration, 21<sup>st</sup> February, 2018, Regd. No-FINAL/ZOO/0002) for the award of PhD (Zoology) in Bodoland University is the result of her original research work completed under my supervision and guidance.

**Dr. Ananta Swargiary**  
**Assistant Professor**  
**Department of Zoology**  
**Bodoland University, Kokrajhar**

**DR. ANANTA SWARGIARY**  
**DEPARTMENT OF ZOOLOGY**  
**BODOLAND UNIVERSITY**  
**KOKRAJHAR**

## SELF-DECLARATION CERTIFICATE

I, Manita Daimari, hereby declare that the thesis entitled "**Study of anti-hyperglycemic property of traditionally used medicinal plants of Kokrajhar district, Assam**" is an original work and has been submitted by me for the award of Doctor of Philosophy in Bodoland University under the supervision of Dr. Ananta Swargiary. Further, I also declare that the thesis, or any part embodied in this thesis has not formed the basis for the award of any degree in this University or any other University.

*Manita Daimari*

Manita Daimari (Research Scholar)

Department of Zoology

Bodoland University, Kokrajhar

Prov. Regd No: FINAL/ZOO/0002 of  
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- *“Dedicated to my loving mother who instilled in me the virtues of perseverance and commitment and fuelled my determination to see this thesis through”*

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**Manita Daimari**  
**Ph.D. Research Scholar**

## ABBREVIATIONS

µg	Micro gram
AAE	Ascorbic acid equivalent
AAS	Atomic Absorption Spectrometry
ABTS	2,2- Azino-bis-3-ethylbenzothiazoline-6-sulphonic acid assay
ADA	American Diabetes Association
AlCl <sub>3</sub>	Aluminium Chloride
ALP	Alkaline Phosphatase
ALT	Alanine Transaminase
AOT	Acute Oral Toxicity
AST	Aspartate Transaminase
BSA	Bovine Serum Albumin
bw	Body weight
Cd	Cadmium
CDB	Community Development Blocks
CDNB	1-Chloro, 2-4-Dinitrobenzene
Conc.	Concentrated
CPSEA	Committee for the purpose of Control and Supervision of Experiments on Animals
Cr	Chromium
CR-I	Castelli Index -I
CR-II	Castelli Index -II

CR-III	Castelli Index -III
Cu	Copper
DD	Double diabetes
dH <sub>2</sub> O	Distilled water
DKA	Diabetic Ketoacidosis
dL	Decilitre
DM	Diabetes Mellitus
DMSO	Dimethyl sulfoxide
DNS	Dinitro Salicylic Acid
DPP-4	Dipeptidyl peptidase-IV inhibitors
DPPH	2,2-Diphenyl-1-Picrylhydrazyl
EDTA	Ethylenediamine Tetra acetic acid
FC	Frequency of citation
FeCl <sub>3</sub>	Ferric Chloride
FeSO <sub>4</sub>	Ferrous Sulphate
FIV	Family Importance Value
FRAP	Ferric Reducing Antioxidant Power
FRDF	<i>Ficus racemosa</i> diethyl ether fraction
GDM	Gestational Diabetes
GSH	Reduced Glutathione
GST	Glutathione-S-transferase
H <sub>2</sub> O <sub>2</sub>	Hydrogen Peroxide
H <sub>2</sub> SO <sub>4</sub>	Sulphuric acid
HCl	Hydrochloride
HDL	High Density Lipoprotein
HNO <sub>3</sub>	Nitric acid

IDF	International Diabetes Federation
LDL	Low Density Lipoprotein
M	Mole
MDA	Malondialdehyde
mg	milligram
min	minute
mL	milliliter
mM	millimole
Mn	Manganese
Na <sub>2</sub> CO <sub>3</sub>	Sodium Carbonate
NaOH	Sodium Hydroxide
Ni	Nickel
nm	Nanometer
O.D.	Optical Density
OECD	Organisation for Economic Co-operation and Development
OGTT	Oral Glucose Tolerance Test
Pb	Lead
pNPG	p-Nitrophenyl- $\alpha$ -D-glucopyranoside
QE	Quercetin equivalent
RFC	Relative Frequency of Citation
ROS	Reactive Oxygen Species
rpm	Revolutions per minute
SDS	Sodium Dodecyl Sulfate
SGLT-2	Sodium-Glucose cotransporter-2
STZ	Streptozotocin



T1DM	Type-I Diabetes Mellitus
TAC	Total Antioxidant Capacity
TBA	Thiobarbituric acid
TBARS	Thiobarbituric Acid Reactive Substances
TC	Total Cholesterol
TCA	Trichloroacetic acid
TFC	Total Flavonoid Content
TIIDM	Type-II Diabetes Mellitus
TPC	Total Phenolic content
TPTZ	2,4,6-Tripyridyl-S-Triazine
UV-Vis	Ultraviolet-Visible
VLDL	Very Low-Density Lipoprotein
WHO	World Health Organisation
Zn	Zinc

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