CENTRAL UNIVERSITY OF KERALA
केरल केन्द्रीय विश्वविद्यालय

DEPARTMENT OF Genomic Science

Si: No:	Name Of Student	Register Number	Year of Admission	Title of thesis	Guide	Type Of Work	Place Of Work
1	Abindas	BGS051901	2019	A comparative analysis of mitochondrial genomes in araneae (arthropoda:arachnida): heteropoda venatoria ,tetragnatha maxillosa and tetragnatha nitens	Dr. Tony Grace	Dissertation	CUK
2	Akhil B	BGS051902	2019	Antimicrobial peptide genes in oecophylla smaragdina (weaver ants)	Dr. Tony Grace	Dissertation	CUK
3	Alaka Sathyan	BGS051903	2019	Comparative biofilm analysis and identification of a potent source of antibiofilm Agent against enterococcus faecalis atcc 19433 and pseudomonas aeruginosa Pa01	Dr. Ranjith N Kumavath	Dissertation	CUK
4	Amaya S	BGS051904	2019	Study on differential expression of terpene synthase gene across different stages of leaf maturity in lagerstroemia speciosa l.	Dr. Padmesh Pillai	Dissertation	CUK
5	Amritha I V	BGS051905	2019	Expression of immune and digestive genes in developmental stages of acraea terpsicore	DR. TONY GRACE	Dissertation	CUK
6	Anjitha R	BGS051906	2019	Mitochondrial genome sequencing of indian gaur, Bos gaurus using multiple primer sets	Dr. M. Nagarajan	Dissertation	CUK
7	Anush N G	BGS051907	2019	Isolation and sequence characterization of terpene synthase gene from zingiber officinale roscoe	DR. PADMESH PILLAI	Dissertation	CUK
8	Anushree G K	BGS051908	2019	Identification and validation of Reference genes for normalization Of gene expression studies using Quantitative real time pcr in Papilio polytes	DR. TONY GRACE	Dissertation	CUK
9	Arya Raveendran	BGS051909	2019	Isolation and sequence characterization of terpene synthase gene from mucuna pruriens l.	DR. PADMESH PILLAI	Dissertation	CUK
10	Athulya M	BGS051910	2019	Rna-seq transcriptomic analysis of rhodethrin on human Mcf-7 breast cancer cells	Dr. Ranjith N Kumavath	Dissertation	CUK
11	Ayush Baral	BGS051912	2019	Comparative mitochondrial genome analysis of luciola cruciata and luciola curtithorax	DR. TONY GRACE	Dissertation	CUK
12	Disha B	BGS051913	2019	Notch signaling during the induction of skeletal muscle progenitors from human pluripotent stem cells	Dr. Smita Sudheer	Dissertation	CUK
13	Gayathri T V	BGS051915	2019	Screening and partial purification of bioactive bacterioruberin Like molecule from halophiles and their ability to decolorize Synthetic dye	Dr. Ranjith N Kumavath	Dissertation	CUK
14	Indrajith PV	BGS051916	2019	Effect of ketoconazole on trophoblast differentiation of human pluripotent stem cells	Dr. Smita Sudheer	Dissertation	CUK
15	Jukanti Akshitha	BGS051917	2019	Fgf signalling during the induction of skeletal muscle progenitors from human pluripotent stem cells	Dr. Smita Sudheer	Dissertation	CUK

CENTRAL UNIVERSITY OF KERALA
केरल केन्द्रीय विश्वविद्यालय

DEPARTMENT OF Genomic Science

16	Karthik S	BGS051918	2019	Gentamicin catabolism and efflux machinery amongst different bacterial isolates From kerala mangrove sediments	Dr. Ranjith N Kumavath	Dissertation	CUK
17	Kashinath	BGS051919	2019	A novel strategy to unravel plant intelligence: analysis of plant glutamate like receptors	Dr. A. Manickavelu	Dissertation	CUK
18	Khadeejath Ansifa PA	BGS051920	2019	Genetic characterization of six indigenous duck breeds using mitochondrial d-loop region	DR. M. NAGARAJAN	Dissertation	CUK
19	Leena Lalson	BGS051921	2019	Notch signalling during the differentiation of human pluripotent stem cells to trophoblast cells	Dr. Smita Sudheer	Dissertation	CUK
20	Muhasin	BGS051922	2019	Gene influencing rice grain quality	Dr. A. Manickavelu	Dissertation	CUK
21	Nanditha Krishnan B	BGS051923	2019	Sequencing of mitochondrial cytochrome b gene of indian gaur and mithun	DR. M. NAGARAJAN	Dissertation	CUK
22	Neha V Joshi	BGS051924	2019	Whole mitogenome sequencing of indian domestic buffalo, bubalus bubalis	DR. M. NAGARAJAN	Dissertation	CUK
23	Nehna K	BGS051925	2019	Sequencing of mitochondrial d-loop region of indian gaur And mithun	DR. M. NAGARAJAN	Dissertation	CUK
24	Nimisha C	BGS051926	2019	Delineation of differences in saliva microbiota from Healthy individuals using metagenomic adr. Padmesh pillairoach	Dr. Ranjith N Kumavath	Dissertation	CUK
25	Parvathy S	BGS051927	2019	Dr. Tony gracefβ superfamily genes during the induction of skeletal muscle Progenitors from human pluripotent stem cells	Dr. Smita Sudheer	Dissertation	CUK
26	Preethi Poshala	BGS051928	2019	Whole mitochondrial genome sequencing of indian gaur (bos gaurus) using long range pcr	DR. M. NAGARAJAN	Dissertation	CUK
27	Chithra R	BGS051929	2019	Study on differential expression of cyp450 gene across different stages of leaf maturity in lagerstroemia speciosa l.	DR. PADMESH PILLAI	Dissertation	CUK
28	Erra Ravi Kumar	BGS051930	2019	Microgravity effects on lox-5 gene and human organs	Dr. A. Manickavelu	Dissertation	CUK
29	Sreenandana B	BGS051931	2019	Comparative mitochondrial genome sequence analysis of millipede	DR. TONY GRACE	Dissertation	CUK
30	Swathi Raveendran	BGS051932	2019	Genetic understanding of type two diabetes Mellitus in kerala population	Dr. A. Manickavelu	Dissertation	CUK

A COMPARATIVE ANALYSIS OF MITOCHONDRIAL GENOMES IN ARANEAE (Arthropoda:Arachnida): *Heteropoda venatoria* ,*Tetragnatha maxillosa* AND *Tetragnatha nitens*

Submitted in partial fulfilment of the requirements of the

Degree

MASTER OF SCIENCE

IN

GENOMIC SCIENCE

By

ABINDAS

BGS 05 1901

Supervisor

DR. TONY GRACE

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCES

CENTRAL UNIVERSITY OF KERALA

DECLARATION

I do hereby declare that this work has been carried out by me under the guidance and supervision of **Dr. Tony Grace**, Assistant Professor, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod and that this work has not been submitted in full or in part for any other degree or certification.

Place: Kannur, Kerala

Date: 10 May, 2021

ABINDAS

BGS051901

Central University of Kerala

CENTRAL UNIVERSITY OF KERALA

CERTIFICATE

This is to certify that the dissertation entitled *"A comparative analysis of mitochondrial genomes in Araneae (Arthropoda:Arachnida): Heteropoda venatoria ,Tetragnatha maxillosa and Tetragnatha nitens"* submitted by Abindas, BGS051901 towards partial fulfilments for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod is based on research carried out by him under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

Dr. Tony Grace (Supervisor)
Assistant Professor
Dept. of Genomic Science
School of Biological Sciences
Central University of Kerala

Head
Dept. of Genomic Science
School of Biological Sciences
Central University of Kerala

ANTIMICROBIAL PEPTIDE GENES IN *Oecophylla smaragdina* (Weaver ants) (Order: Hymenoptera)

Submitted to

Central University of Kerala

in partial fulfilment of the requirements of the degree.

MASTER OF SCIENCE
IN
GENOMIC SCIENCE

AKHIL B
BGS051902

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCES

APRIL 2021

DEPARTMENT OF GENOMIC SCIENCE
CERTIFICATE

This is to certify that the dissertation entitled **"ANTIMICROBIAL PEPTIDE GENES IN *Oecophylla smaragdina* (Weaver ants) (Order: Hymenoptera)."** submitted by **AKHIL B (BGS051902)**, towards the partial fulfilment of the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod, Kerala, is based on the research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

External examiner

Dr. Tony Grace (Supervisor)
Assistant Professor
Dept of Genomic Science
School of Biological Science
Central University of Kerala

HEAD
Department of Genomic Science
School of Biological Science
Central University of Kerala

DECLARATION

I hereby declare that this dissertation entitled **"ANTIMICROBIAL PEPTIDE GENES IN *Oecophylla smaragdina* (Weaver ants) (Order: Hymenoptera*)".*** submitted to the Central University of Kerala, is a record of the original work done by me under the guidance and supervision of **Dr. Tony Grace**, Assistant Professor, Department of Genomic Science, School of Biological Science, Central University of Kerala, Kasaragod; as part of the project work for the partial fulfilment of the requirements for the award of Master of Science in Genomic Science. The results comprised herein have not been published in full or in part for any other degree or certification.

AKHIL B
BGS051902
Place: Kasaragod
Date: 13-05-2021

Comparative Biofilm analysis and Identification of a potent source of antibiofilm agent against *Enterococcus faecalis* ATCC 19433 and *Pseudomonas aeruginosa* PA01

Dissertation submitted to the Central University of Kerala in partial fulfilment of the requirements for the degree of Master of Science in

GENOMIC SCIENCE

Submitted by,

Alaka Sathyan

(BGS051903)

Under the supervision of

Dr. Ranjith N. Kumavath

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCE

CENTRAL UNIVERSITY OF KERALA

PERIYE, KASARAGOD-671316

MAY, 2021

CENTRAL UNIVERSITY OF KERALA

Department of Genomic Science
School of Biological Sciences
Kasaragod, Kerala– 671316
India

CERTIFICATE

This is to certify that the dissertation entitled "**Comparative Biofilm analysis and Identification of a potent source of antibiofilm agent against *Enterococcus faecalis* ATCC 19433 and *Pseudomonas aeruginosa* PA01**" submitted by Alaka Sathyan, (Reg. No. BGS051903) to the Central University of Kerala in partial fulfilment of the requirements for the award of Master of Science in Genomic Science is based on research carried out by her under my guidance and supervision. It is further certified that this research work has not been submitted either partially or fully for any other degree or fellowship of this or any other University.

12/05/21

…….

Supervisor

Dr. Ranjith N. Kumavath

…….

Head Of the Department

DECLARATION

I, **Alaka Sathyan (BGS051903)** hereby declare that the dissertation work entitled **"Comparative Biofilm analysis and Identification of a potent source of antibiofilm agent against *Enterococcus faecalis* ATCC 19433 and *Pseudomonas aeruginosa* PA01"** submitted to **Central University of Kerala** in partial fulfilment of the requirements for the award of the degree of Master of Science in Genomic Science is a bonafide record of original research work done by me under the supervision and guidance of **Dr Ranjith N. Kumavath,** Sr. Assistant Professor, Department of Genomic Science, Central University Of Kerala, Kasaragod.

I also hereby declare that this work in part or full has not been submitted to any other University/Institution for the award of any Degree/ Diploma before.

Alaka Sathyan

DISSERTATION

ON

STUDY ON DIFFERENTIAL EXPRESSION OF TERPENE SYNTHASE GENE ACROSS DIFFERENT STAGES OF LEAF MATURITY IN *Lagerstroemia speciosa* L.

Submitted in partial fulfilment of the requirements of the

Degree

MASTER OF SCIENCE

IN

GENOMIC SCIENCE

BY

AMAYA S

BGS051904

Supervisor

DR. PADMESH P PILLAI

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCES

CENTRAL UNIVERSITY OF KERALA

DECLARATION

I do hereby declare that this work has been carried out by me under the guidance and supervision of **Dr. Padmesh P Pillai**, Associate Professor, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod and that this work has not been submitted in full or in part for any other degree or certification.

KASARAGOD **AMAYA S**

Date: May, 2021 BGS051904

CENTRAL UNIVERSITY OF KERALA

CERTIFICATE

This is to certify that the dissertation entitled *"Study on differential expression of terpene synthase gene across different stages of leaf maturity in Lagerstroemia speciosa L."* submitted by Amaya S BGS051904 towards partial fulfilments for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod is based on research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

.....

Dr. Padmesh P Pillai (Supervisor)

Associate Professor & Head

Dept. of Genomic Science

School of Biological Sciences

Central University of Kerala

EXPRESSION OF IMMUNE AND DIGESTIVE GENES IN DEVELOPMENTAL STAGES OF *ACRAEA TERPSICORE*.

Submitted to

Central University of Kerala

In partial fulfilment of the requirements of the degree.

MASTER OF SCIENCE

IN

GENOMIC SCIENCE

AMRITHA I V

BGS051905

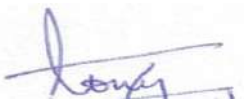
DEPARTMENT OF GENOMIC SCIENCE SCHOOL OF BIOLOGICAL SCIENCES

CENTRAL UNIVERSITY OF KERALA

DEPARTMENT OF GENOMIC SCIENCE

CERTIFICATE

This is to certify that the dissertation entitled **"Contribution of immune and digestive genes in the development of *Acraea terpsicore*."** submitted by **AMRITHA I V (BGS051905)**, towards the partial fulfilment of the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasargod, Kerala, is based on the research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.



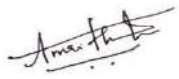
Dr. Tony Grace (Supervisor)
Assistant Professor
Dept of Genomic Science
School of Biological Science

Head
Dept of Genomic Science
School of Biological Science
Central University of Kerala

DECLARATION

I hereby declare that this dissertation entitled "Contribution of immune and digestive genes in the development of *Acraea terpsicore*."submitted to the central university of Kerala, is a record of the original work done by me under the guidance and supervision of Dr. Tony Grace, Assistant Professor, Department of Genomic Science, School of Biological Science, Central University of Kerala, Kasaragod; as part of the project work for the partial fulfilment of the requirements for the award of Master of Science in Genomic Science. The results comprised herein have not been published in full or in part for any other degree or certification.

AMRITHA I V



BGS051905

Place: Kasaragod

Date: 14/05/2021

Mitochondrial genome sequencing of Indian gaur, *Bos gaurus* using multiple primer sets

A dissertation submitted in the partial fulfilment for the award of Degree of Master of Science in Genomic Science

MASTER OF SCIENCE IN GENOMIC SCIENCE

Submitted by

ANJITHA R

Reg.No. BGS051906

Under the guidance of

Dr. M NAGARAJAN

Assistant Professor

Department of Genomic Science

Department of Genomic Science

School of Biological Science

Central University of Kerala

May, 2021

CERTIFICATE

This is to certify that the dissertation entitled "Mitochondrial genome sequencing of Indian gaur, *Bos gaurus* using multiple primer sets*"* being submitted by ANJITHA R (Reg. no. BGS051906) in partial fulfilment of the award of the degree of Master of Science in Genomic Science, is based on research carried out by her under my supervision at Dept. of Genomic Science, Central University of Kerala, Periye, Kasaragod, Kerala during the period of March 2021-April2021. It is further certified that this work or part of this work has not been submitted elsewhere for any other degree.

Signature of supervisor

Signature of H.O.D

Signature of Examiner

DECLARATION

I **ANJITHA R**, hereby declare that my work entitled entitled "**MITOCHONDRIAL GENOME SEQUENCING OF INDIAN GAUR, *Bos gaurus*** using multiple primer sets**"** a Master's degree project under the guidance of Dr. M. Nagarajan, Assistant Professor Department of Genomic Science, Central University of Kerala. This is an original record of my Master's Degree Project work which is submitted of the partial fulfilment of the requirement of Master's Degree.

Place: Periya Central University of Kerala
Date: May,2021

(Signature)

ANJITHA R
M.SC.Genomic Science
Central University of Kerala
Reg.No.BGS051906

.

DISSERTATION

ON

"ISOLATION AND SEQUENCE CHARACTERIZATION OF TERPENE SYNTHASE GENE FROM *Zingiber officinale* Roscoe"

Submitted in partial fulfilment of the requirements of the

Degree

MASTER OF SCIENCE

IN

GENOMIC SCIENCE

By

ANUSH N G

BGS 05 19 07

Supervisor

DR. PADMESH P PILLAI

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCES

CENTRAL UNIVERSITY OF KERALA

DECLARATION

I do hereby declare that this work has been carried out by me under the guidance and supervision of **Dr. Padmesh P Pillai**, Associate Professor, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod and that this work has not been submitted in full or in part for any other degree or certification.

KASARAGOD

ANUSH N G

BGS051907

CENTRAL UNIVERSITY OF KERALA

CERTIFICATE

This is to certify that the dissertation entitled *"Isolation and sequence characterization of terpene synthase gene from Zingiber officinale Roscoe"* submitted by **ANUSH N G**, **BGS051907** towards partial fulfilments for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod is based on research carried out by him under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

Dr. PADMESH P PILLAI
(Supervisor)

Associate Professor

Head of the department

Dept. of Genomic Science

School of Biological Sciences

Central University of Kerala

IDENTIFICATION AND VALIDATION OF REFERENCE GENE FOR NORMALIZATION OF GENE EXPRESSION STUDIES USING QUANTITATIVE REAL TIME PCR IN PAPILIO POLYTES (LEPIDOPTERA: PAPILIONIDAE).

Submitted to

Central University of Kerala

in partial fulfilment of the requirements of the degree

MASTER OF SCIENCE
IN
GENOMIC SCIENCE

ANUSHREE G K
BGS051908

Department Genomic Science
School Of Biological Sciences

May 2021

MAY 2021

CENTRAL UNIVERSITY OF KERALA

DEPARTMENT OF GENOMIC SCIENCE

CERTIFICATE

This is to certify that the dissertation entitled **"Identification and validation of reference gene for normalization of gene expression studies using quantitative real time PCR in *Papilio polytes* (Lepidoptera: Papilionidae)."** submitted by **ANUSHREE G K (BGS051908)**, towards the partial fulfilment of the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod, Kerala, is based on the research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

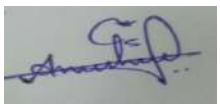
External examiner

Dr. Tony Grace (Supervisor)
Assistant Professor
Dept of Genomic Science
School of Biological Science
Central University of Kerala

Head
Dept of Genomic Science
School of Biological Science
Central University of Kerala

DECLARATION

I hereby declare that this dissertation entitled **"Identification and validation of reference gene for normalization of gene expression studies using quantitative real time PCR in *Papilio polytes* (Lepidoptera: Papilionidae)".** submitted to the Central University of Kerala, is a record of the original work done by me under the guidance and supervision of **Dr. Tony Grace**, Assistant Professor, Department of Genomic Science, School of Biological Science, Central University of Kerala, Kasaragod; as part of the project work for the partial fulfilment of the requirements for the award of Master of Science in Genomic Science. The results comprised herein have not been published in full or in part for any other degree or certification.



ANUSHREE G K
BGS051908
Place:Periya, Kasaragod
Date:

DISSERTATION

ON

ISOLATION AND SEQUENCE CHARACTERIZATION OF TERPENE SYNTHASE GENE FROM MUCUNA PRURIENS L.

Submitted in partial fulfillment of the requirements of the

Degree

MASTER OF SCIENCE

IN

GENOMIC SCIENCE

By

ARYA RAVEENDRAN

BGS051909

Under the guidance of

DR. PADMESH P PILLAI

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCES

CENTRAL UNIVERSITY OF KERALA

DECLARATION

I do hereby declare that this work has been carried out by me under the guidance and supervision of **Dr. Padmesh P Pillai**, Associate Professor and Head, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod and that this work has not been submitted in full or in part for any other degree or certification.

Place: KASARAGOD ARYA RAVEENDRAN

Date: BGS051909

CENTRAL UNIVERSITY OF KERALA

CERTIFICATE

This is to certify that the dissertation entitled "**Isolation and Sequence Characterization of Terpene Synthase Gene from *Mucuna Pruriens L.*"** submitted by ARYA RAVEENDRAN, BGS051909 towards partial fulfillments for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod is based on research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

…….....

Dr. Padmesh P Pillai (Supervisor)

Associate Professor & Head

Department of Genomic Science

School of Biological Sciences

Central University of Kerala

RNA-Seq Transcriptomic Analysis of Rhodethrin on Human MCF-7 Breast Cancer Cells

A thesis submitted to
Central University of Kerala
in partial fulfilment of the requirements for the degree of

Master of Science
in
Genomic Science

By

Athulya M

Reg No: BGS051910

Department of Genomic Science

School of Biological Science

Central University of Kerala

Under the Supervision of

Dr. Ranjith Kumavath, Ph.D, FRSB

Sr. Assistant Professor

Department of Genomic Science,

Central University of Kerala

May 2021

DECLARATION

I, Athulya M, hereby declare that this project entitled "***RNA-Seq Transcriptomic Analysis of Rhodethrin and Apigenin on Human MCF-7 Breast Cancer Cells***" which is being submitted as the MSc project of the final semester (Semester 4, 2021) is a record of the original work done by me under the guidance and supervision of Dr. Ranjith Kumavath, Assistant Professor, Department of Genomic Science, Central University of Kerala. The results embodied in this project have not formed the basis for the award of any Degree, Diploma, Associate-ship, Fellowship or a similar title to any candidate from any University to the best of my knowledge.

(Athulya M)

Place: Periya

Date: 12-05-2021

CENTRAL UNIVERSITY OF KERALA

Department of Genomic Science
School of Biological Sciences
Kasaragod, Kerala– 671316
India

CERTIFICATE

This is to certify that the dissertation entitled "***RNA-Seq Transcriptomic Analysis of Rhodethrin and Apigenin on Human MCF-7 Breast Cancer Cells***" submitted by Athulya M, (Reg. No. BGS051910) to the Central University of Kerala in partial fulfilment of the requirements for the award of Master of Science in Genomic Science is based on research carried out by her under my guidance and supervision. It is further certified that this research work has not been submitted either partially or fully for any other degree or fellowship of this or any other University.

12/05/21

…….

Supervisor

Dr. Ranjith N. Kumavath

…….

Head Of the Department

COMPARATIVE MITOCHONDRIAL GENOME ANALYSIS OF *Luciola cruciata* AND *Luciola curtithorax*

Submitted in partial fulfilment of the requirements of the

Degree

MASTER OF SCIENCE

IN

GENOMIC SCIENCE

By

AYUSH BARAL

BGS 05 1912

Supervisor

DR. TONY GRACE

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCES

CENTRAL UNIVERSITY OF KERALA

DECLARATION

I do hereby declare that this work has been carried out by me under the guidance and supervision of **Dr. Tony Grace**, Assistant Professor, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod and that this work has not been submitted in full or in part for any other degree or certification.

Place: Durgapur, Assam **AYUSH BARAL**

Date: 10 May, 2021 BGS051912

CENTRAL UNIVERSITY OF KERALA

CERTIFICATE

This is to certify that the dissertation entitled *"Comparative Mitochondrial Genome Analysis of Luciola cruciata and Luciola curtithorax"* submitted by Ayush Baral, BGS051912 towards partial fulfilments for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod is based on research carried out by him under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

Dr. Tony Grace (Supervisor)

Assistant Professor

Dept. of Genomic Science

School of Biological Sciences

Central University of Kerala

Head

Dept. of Genomic Science

School of Biological Sciences

Central University of Kerala

Notch Signaling during the induction of Skeletal Muscle progenitors from human Pluripotent Stem cells

Dissertation submitted to the Department of Genomics Science, Central University of Kerala

In Partial Fulfillment of the Requirement for the Award of the Degree of

MASTER OF SCIENCE (GENOMIC SCIENCE)

Submitted by

B DISHA

BGS 051913

Under the guidance and supervision of

DR. SMITA SUDHEER

Assistant Professor

Stem Cell Laboratory
Department of Genomic Science
School of Biological Science

Central University of Kerala

Kasaragod

MAY 2021

Department of Genomic Science

School of Biological Sciences, Central University of Kerala

CERTIFICATE

This is to certify that the dissertation entitled, **"Notch Signaling during the induction of Skeletal Muscle progenitors from human Pluripotent Stem cells"**, submitted to the Central University of Kerala in partial fulfilment of the requirements for the award of the Degree of Master of Science (Genomic Science), is a bonafide record of original work carried out by **Ms. B Disha**, under the guidance of **Dr. Smita Sudheer**, at the Stem Cell Laboratory, Department of Genomic Science, School of Biological sciences, Central University of Kerala, from 15/03/2021 to 13/04/2021. This project has not been submitted partially or fully for the award of any other degree or diploma title.

Signature of the Project Guide

Dr. Smita Sudheer

Assistant Professor Stem Cell Laboratory

Department of Genomic Science

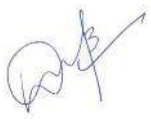
Central University of Kerala

Signature of the Head of the Department

DECLARATION

I declare that I have authored the enclosed Master's Thesis under the guidance and supervision of **Dr. Smita Sudheer**, Assistant Professor, Stem Cell Laboratory, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod. I assure that this thesis is a result of my personal work and that I have not used sources or meas for its completion without declaration in the text. All material that has been quoted either literally or by content is explicitly characterized. Furthermore, I declare that I have transferred the final digital text document to the commissioned supervisor. Beyond this, I assure that this bachelor thesis was not used, neither completely nor partially, for prior examination.

This work was done during the period from 15/03/2021 to 13/04/2021.



Kasaragod

B Disha

BGS051913

Screening and Partial Purification of Bioactive Bacterioruberin like molecule from Halophiles and Their Ability to Decolorize Synthetic Dye

Dissertation submitted in partial fulfillment of requirements for the award of degree of

MASTER OF SCIENCE IN GENOMIC SCIENCE

Submitted by

GAYATHRI T V

BGS051916

Under the Guidance of

Dr. RANJITH KUMAVATH
Assistant Professor
Department of Genomic Science,
Central University of Kerala, Periya,
Kasaragod, Kerala

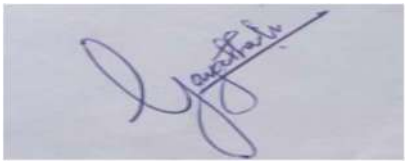
Department of Genomic Science

School of Biological Science, Central University of Kerala,

MAY 2021

DECLARATION

I, Ms. GAYATHRI T V **(BGS051916),** hereby declare that the dissertation entitled **"*Screening and Partial Purification of Bioactive Bacterioruberin like molecule from Halophiles and Their Ability to Decolorize Synthetic Dye*"** submitted to Central University of Kerala, in partial fulfillment of the requirement for the award of Degree of Master of Science in Genomic Science, is the outcome of the work outlined and executed by me under the guidance of **Dr. Ranjith Kumavath** in the Department of Genomic Science, School of Biological Science, Central University of Kerala. I further declare that this dissertation has not led to the award of any degree and is an original record of my work during the period of March 2021 to May 2021.



Date: 12.05.2021

Place: Periya

Ms. GAYATHRI T V

CERTIFICATE

This is to certify that the dissertation entitled **"*Screening and Partial Purification of Bioactive Bacterioruberin like molecule from Halophiles and Their Ability to Decolorize Synthetic Dye*"** submitted by Ms. GAYATHRI T V (Reg. BGS051916), to the Central University of Kerala in partial fulfilment of the requirements for the award of Master of Science in Genomic Science is based on research carried out by her under my guidance and supervision. It is further certified that this research work has not been submitted either partially or fully for any other degree or fellowship of this or any other University.

12/05/21

.....

Supervisor

Dr. Ranjith N. Kumavath

.....

Head Of the Department

EFFECT OF KETOCONAZOLE ON TROPHOBLAST DIFFERENTIATION OF HUMAN PLURIPOTENT STEM CELLS

Dissertation submitted to the Department of Genomics Science, Central University of Kerala

In Partial Fulfilment of the Requirement for the Award of the Degree of

MASTER OF SCIENCE (GENOMIC SCIENCE)

Submitted by

INDRAJITH PV

BGS051917

Under the guidance and supervision of

DR. SMITA SUDHEER

Assistant Professor

Department of Genomic Science School of Biological Science

Central University of Kerala Kasaragod

MAY 2021

Department of Genomic Science

School of Biological Sciences, Central University of Kerala

CERTIFICATE

This is to certify that the dissertation entitled, **"Effect of Ketoconazole on trophoblast differentiation of human pluripotent stem cells"**, submitted to the Central University of Kerala in partial fulfilment of the requirements for the award of the Degree of Master of Science (Genomic Science), is a bona fide record of original work carried out by **Mr. Indrajith P V.**, under the guidance of **Dr. Smita Sudheer**, at the Department of Genomic Science, School of Biological sciences, Central University of Kerala, from 15/03/2021 to 13/04/2021. This project has not been submitted partially or fully for the award of any other degree or diploma title.

_____

Signature of the Project Guide

Dr. Smita Sudheer

Assistant Professor Stem Cell Laboratory

Department of Genomic Science

Central University of Kerala

Signature of the Head of the Department

_____

DECLARATION

I declare that I have authored the enclosed Master's Thesis under the guidance and supervision of **Dr. Smita Sudheer**, Assistant Professor, Stem Cell Laboratory, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod. I assure that this thesis is a result of my personal work and that I have not used sources or means for its completion without declaration in the text. All material that has been quoted either literally or by content is explicitly characterized. Furthermore, I declare that I have transferred the final digital text document to the commissioned supervisor. Beyond this, I assure that this bachelor thesis was not used, neither completely nor partially, for prior examination.

This work was done during the period from 15/03/2021 to 13/04/2021.

Kasaragod

Indrajith PV

BGS051917

FGF signalling during the induction of skeletal muscle progenitors from Human Pluripotent Stem Cells

Dissertation submitted to the Department of Genomics Science, Central University of Kerala.

In Partial Fulfilment of the Requirement for the Award of the Degree of MASTER OF SCIENCE (GENOMIC SCIENCE)

Submitted by

JUKANTI AKSHITHA

BGS051918

Under the guidance and supervision of

DR. SMITA SUDHEER

Assistant Professor

Stem Cell Laboratory

Department of Genomic Science

School of Biological Science

Central University of Kerala

Kasaragod

MAY 2021

Department of Genomic Science

School of Biological Sciences, Central University of Kerala.

CERTIFICATE

This is to certify that the dissertation entitled, **"FGF signalling during the induction of skeletal muscle progenitors from Human Pluripotent Stem Cells"**, submitted to the Central University of Kerala in partial fulfillment of the requirement for the award of the Degree of Master of Science (Genomic Science), is a bonafide record of original work carried out by **Ms. Jukanti Akshitha**, under the guidance of **Dr. Smita Sudheer**, at the Stem Cell Laboratory, Department of Genomic Science, School of Biological sciences, Central University of Kerala; from 15th March, 2021 to 10th May,2021. This project has not been submitted partially or fully for the award of any other degree or diploma title.

Signature of the Project Guide **Signature of the Head of the Department**

Dr. Smita Sudheer,

Assistant Professor Stem Cell Laboratory,

Department of Genomic Science,

Central University of Kerala.

DECLARATION

I declare that I have authored the enclosed Master's thesis under the guidance and supervision of **Dr. Smita Sudheer**, Assistant Professor, Stem Cell Laboratory, Department of Genomic Science, School of Biological Sciences, Central University of Kerala and Kasaragod. I assure that this thesis is a result of my personal work and that I have not used sources or means for its completion without declaration in the text. All material that has been quoted either literally or by content is explicitly characterized. Furthermore, I declare that I have transferred the final digital text document to the commissioned supervisor. Beyond this, I assure that this thesis was not used, neither completely nor partially, for prior examination.

This work was done during the period from 15th March, 2021 to 10th May,2021.

Gentamicin catabolism and efflux machinery amongst different bacterial isolates from Kerala Mangrove sediments

Dissertation submitted to the Central University of Kerala in partial fulfilment of the requirements for the degree of Master of Science in

GENOMIC SCIENCE

Submitted by,

NAME: KARTHIK S

(Reg No. BGS051919)

Under the supervision of

Dr. Ranjith N. Kumavath

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCE

CENTRAL UNIVERSITY OF KERALA

PERIYE, KASARAGOD-671316

MAY, 2021

CENTRAL UNIVERSITY OF KERALA

Department of Genomic Science
School of Biological Sciences
Kasaragod, Kerala– 671316
India

CERTIFICATE

This is to certify that the dissertation entitled "**Gentamicin catabolism and efflux machinery amongst different bacterial isolates from Kerala Mangrove sediments**" submitted by Mr. **KARTHIK S (Reg. BGS051918)** to the Central University of Kerala in partial fulfilment of the requirements for the award of Master of Science in Genomic Science is based on research carried out by her under my guidance and supervision. It is further certified that this research work has not been submitted either partially or fully for any other degree or fellowship of this or any other University.

12/05/21

…….. ……

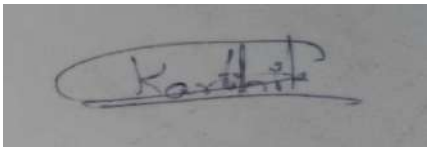
Supervisor
Dr. Ranjith N. Kumavath

Head Of the Department

DECLARATION

I, **Karthik. S,** hereby declare that the dissertation work entitled **"Gentamicin catabolism and efflux machinery amongst different bacterial isolates from Kerala Mangrove sediments"** submitted to **Central University of Kerala** in partial fulfilment of the requirements for the award of the degree of Master of Science in Genomic Science is a bonafide record of original research work done by me under the supervision and guidance of **Dr Ranjith N. Kumavath,** Sr. Assistant Professor, Department of Genomic Science, Central University Of Kerala, Kasaragod.

I also hereby declare that this work in part or full has not been submitted to any other University/Institution for the award of any Degree/ Diploma before.



KARTHIK S
Sign (Name)

A novel strategy to unravel plant intelligence: Analysis of Plant glutamate like receptors (GLRs)

Dissertation Submitted to the

Central University of Kerala, Kasaragod

In the partial fulfilment of the requirements

For the award of the degree of

MASTER OF GENOMIC SCIENCE

Investigator

Mr. KASHINATH

Registration no. BGS051920

Research Supervisor

Dr Alagu Manickavelu

Associate Professor

Department of Genomic Science

School of Biological Science

Central University of Kerala, Kasaragod

May-2021

Dr Alagu Manickavelu
Associate Professor
Department of Genomic Science
School of Biological Science
Central University of Kerala

CERTIFICATE

This is to certify that the dissertation entitled **A novel strategy to unravel plant intelligence: Analysis of Plant glutamate like receptors (GLRs)** submitted to the **Central University Of Kerala**, in fulfilment of the requirement for the award of the degree of **Master Of Genomic Science**, is a record of original and **bona fide** research work done by **Mr Kashinath**, MSc, during the period of 2019-2021,at Department Of Genomics Science, School Of Biological Science, Central University Of Kerala, under my supervision and guidance and that the dissertation has not previously formed for the award of any degree/Diploma/Associateship/Fellowship or any other similar title and that the dissertation represents independent work on the part of the candidates.

Place:Periya
Date: Dr.Alagu Manickavelu

GENETIC CHARACTERIZATION OF SIX INDIGENOUS DUCK BREEDS USING MITOCHONDRIAL D-LOOP REGION

A dissertation submitted in the partial fulfilment for the award of Degree of Master of Science in Genomic Science

MASTER OF SCIENCE IN GENOMIC SCIENCE

By

KHADEEJATH ANSIFA P A

Reg. No. BGS051921

Under the guidance of

DR. M. NAGARAJAN

Assistant Professor

Department of Genomic Science

Department of Genomic Science

School of Biological Science

Central University of Kerala

May, 2021

CERTIFICATE

This is to certify that the dissertation entitled **"Genetic characterization of six indigenous duck breeds using mitochondrial d-loop region"** being submitted by **KHADEEJATH ANSIFA P A, (Reg. No. BGS051921)** in partial fulfilment of the award of the degree of Master of Science in Genomic Science, is based on research carried out by her under my supervision at Dept. of Genomic Science, Central University of Kerala, Periye, Kasaragod, Kerala during the period of March 2021-May 2021. It is further certified that this work or part of this work has not been submitted elsewhere for any other degree.

Signature of Supervisor **Signature of H.O.D**

Signature of Examiner

DECLARATION

I do hereby declare that the dissertation entitled **"Genetic characterization of six indigenous duck breeds using mitochondrial d-loop region"** a Master's degree project under the guidance of **Dr. M. Nagarajan**, Assistant Professor Department of Genomic Science, Central University of Kerala. This is an original record of my Master's Degree Project work which is submitted of the partial fulfilment of the requirement of Master's Degree.

Place: Central University of Kerala

Date: May, 2021

(Signature)

Khadeejath Ansifa P A

Reg No: BGS051921

MSc Genomic Science

Central University of Kerala

Notch signalling during the differentiation of human Pluripotent Stem Cells to trophoblast cells

Dissertation submitted to the Department of Genomics Science, Central University of Kerala

In Partial Fulfilment of the Requirement for the Award of the Degree of

MASTER OF SCIENCE (GENOMIC SCIENCE)

Submitted by

LEENA LALSON

BGS051922

Under the guidance and supervision of

DR. SMITA SUDHEER

Assistant Professor

Stem Cell Laboratory

Department of Genomic Science

School of Biological Science

Central University of Kerala

Kasaragod

MAY 2021

CERTIFICATE

This is to certify that the dissertation entitled, **"Notch signalling during the differentiation of human pluripotent stem cells to trophoblast cells"**, submitted to the Central University of Kerala in partial fulfilment of the requirements for the award of the Degree of Master of Science (Genomic Science), is a bonafide record of original work carried out by **Ms. Leena Lalson**, under the guidance of **Dr. Smita Sudheer**, at the Stem Cell Laboratory, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, from 15/03/2021 to 13/04/2021. This project has not been submitted partially or fully for the award of any other degree or diploma title.

Signature of the Project Guide

Dr. Smita Sudheer

Assistant Professor

Stem Cell Laboratory

Department of Genomic Science

Central University of Kerala

Signature of the Head of the Department

_____

DECLARATION

I declare that I have authored the enclosed Master's Thesis under the guidance and supervision of **Dr. Smita Sudheer**, Assistant Professor, Stem Cell Laboratory, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod. I assure that this thesis is a result of my personal work and that I have not used sources or means for its completion without declaration in the text. All material that has been quoted either literally or by content is explicitly characterized. Furthermore, I declare that I have transferred the final digital text document to the commissioned supervisor. Beyond this, I assure that this bachelor thesis was not used, neither completely nor partially, for prior examination.

This work was done during the period from 15/03/2021 to 13/04/2021.

Kasaragod

Leena Lalson

BGS051922

GENE INFLUENCING RICE GRAIN QUALITY

A Dissertation Report Submitted to

Central University of Kerala in partial fulfilment

of the requirements for the award of the Degree in

MASTER OF SCIENCE IN GENOMIC SCIENCE

Investigator

Mr. MUHASIN

(Reg.No: BGS051923)

Research supervisor

Dr. A. MANICKAVELU

Associate professor

DEPARTMENT OF GENOMICSCIENCE

SCHOOLOFBIOLOGICALSCIENCE

CENTRAL UNIVERSITY OF KERALA

2019 – 2021

CERTIFICATE

This is to certify that the dissertation entitled "**Gene influencing rice grain quality**" submitted by **Mr. MUHASIN, (Reg. No: BGS051923)** towards partial fulfilment for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod, is based on research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

Dr. A. Manickavelu **…….……**
Supervisor

Dr. Padmesh Pillai **…….**
HOD, Dept. of Genomic Science

DECLARATION

I do hereby declare that this thesis entitled "**Gene influencing rice grain quality**" has been carried out by me under the guidance and supervision of **Dr. A. Manickavelu**, Associate Professor, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod, and that this work has not been submitted in full or in part for any other degree or diploma of any other University or Institute earlier.

Central University of Kerala

Periya, Kasaragod

Date: 12-/05-/2021

MUHASIN

Reg. No: BGS051932

Sequencing of Mitochondrial Cytochrome *b* Gene of Indian Gaur and Mithun

A dissertation submitted in the partial fulfilment for the award of Degree of Master of Science in Genomic Science

MASTER OF SCIENCE IN GENOMIC SCIENCE

By

NANDITHA KRISHNAN B

Reg.No: BGS051924

Under the guidance of

DR. M. NAGARAJAN

Assistant Professor

Department of Genomic Science

Department of Genomic Science

School of Biological Sciences

Central University of Kerala

May, 2021

CERTIFICATE

This is to certify that the dissertation entitled “Sequencing of Mitochondrial Cytochrome *b* Gene of Indian Gaur and Mithun” being submitted by Ms. NANDITHA KRISHNAN B, (Reg.No: BGS051924) in partial fulfillment of the award of the degree of Master of Science in Genomic Science, is based on research carried out by her under my supervision at Dept. of Genomic Science, Central University of Kerala, Periye, Kasaragod, Kerala during the period of March 2021-April2021. It is further certified that this work or part of this work has not been submitted elsewhere for any other degree.

Signature of supervisor **Signature of H.O.D**

Signature of Examiner

DECLARATION

I do hereby declare that the dissertation entitled **"Sequencing of Mitochondrial Cytochrome *b* Gene of Indian Gaur and Mithun"** a Master's degree project under the guidance of Dr. M. Nagarajan, Assistant Professor Department of Genomic Science, Central University of Kerala. This is an original record of my Master's Degree Project work which is submitted of the partial fulfilment of the requirement of Master's Degree.

Place: Central University of Kerala

Date: May, 2021

(Signature)

NANDITHA KRISHNAN B

Reg.No: BGS051924

MSc Genomic Science

Central University of Kerala

WHOLE MITOGENOME SEQUENCING OF INDIAN DOMESTIC BUFFALO, *BUBALUS BUBALIS*

Submitted to the Central University of Kerala in partial fulfilment of the requirement for the award of the degree of

MASTER OF SCIENCE

Submitted by

NEHA V. JOSHI

BGS051925

Under the guidance of

Dr. M. Nagarajan

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCE

CENTRAL UNIVERSITY OF KERALA, KASARAGOD

MAY, 2021

CERTIFICATE

This is to certify that the dissertation entitled "**Whole mitogenome sequencing of Indian domestic buffalo, *Bubalus bubalis***" submitted by Neha V. Joshi is a bonafide record of research work accomplished under my supervision towards the partial fulfilment of the Masters of Science degree in Genomic Science of the Central University of Kerala, and no part thereof has been presented for the award of any other degree, diploma or similar titles of any university.

Signature of Guide **Signature of H.O.D**

Signature of Examiner

DECLARATION

I, Neha V. Joshi, hereby declare that the project entitled "**Whole mitogenome sequencing of Indian domestic buffalo, *Bubalus bubalis***", submitted to the Central University of Kerala in partial fulfilment of the requirement for the award of the degree of Master of Science in Genomic Science is a bonafide record of original research work done by me under the supervision and guidance of Dr. M. Nagarajan, Assistant professor, Department of Genomic Science, Central University of Kerala, Kasaragod.

Neha V. Joshi

BGS051925

SEQUENCING OF MITOCHONDRIAL D-LOOP REGION OF INDIAN GAUR AND MITHUN

A thesis submitted to
Central University of Kerala
in partial fulfillment of the requirements for the degree of

Master of Science
in
Genomic Science

By

NEHNA K

Reg. No. BGS051926

Department of Genomic Science
School of Biological Science
Central University of Kerala
Kasaragod

May, 2021

CERTIFICATE

This is to certify that the project entitled "**Sequencing of mitochondrial D-loop region of Indian gaur and mithun** " submitted in partial fulfillment of the requirements for the award of the degree of Master of Science in Genomic Science to Central University of Kerala, done by Ms. NEHNA K, registration number BGS051926, is an authentic work carried out by her at Central University of Kerala, Periye, Kasaragod, Kerala, under the guidance and supervision of Dr. M. Nagarajan, Assistant Professor during the period of March 2021- April 2021.

Signature of the HOD **Signature of the supervisor**

Signature of the Examiner

DECLARATION

I, Nehna K, hereby declare that this project entitled "**Sequencing of mitochondrial D-loop region of Indian gaur and mithun**" which is being submitted as the MSc project of the final semester (Semester 4, 2021) is a record of the original work done by me under the guidance and supervision of Dr. M. Nagarajan, Assistant Professor, Department of Genomic Science, Central University of Kerala. The results embodied in this project have not formed the basis for the award of any Degree, Diploma, Associate-ship, Fellowship or a similar title to any candidate from any University to the best of my knowledge.

(Signature)

NEHNA K

Reg. No.- BGS051926

Place:

Date :

Delineation of Differences in Saliva Microbiota from Healthy Individuals using Metagenomic Approach

A dissertation report submitted to

Central University of Kerala in partial fulfilment

of the requirements for the award of the Degree in

MASTER OF SCIENCE IN GENOMIC SCIENCE

By
Ms. NIMISHA C

(Reg. No: BGS051927)

Under the Guidance of
Dr. RANJITH KUMAVATH

DEPARTMENT OF GENOMIC SCIENCE

CENTRAL UNIVERSITY OF KERALA
MAY, 2021

DECLARATION

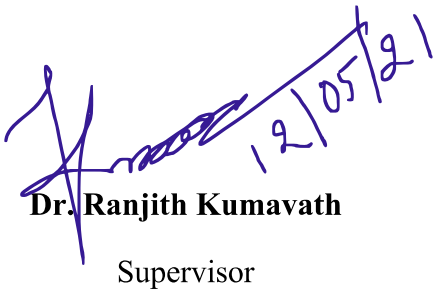
I, **Ms. Nimisha C (BGS051927)** hereby declare that the dissertation entitled ***"Delineation of differences in saliva microbiota from healthy individuals using shotgun metagenomic approach"*** submitted to Central University of Kerala, in partial fulfillment of the requirement for the award of Degree of Master of Science in Genomic science, is the outcome of the work outlined and executed by me under the guidance of **Dr. Ranjith Kumavath** in the Department of Genomic science, School of biological science, Central University of Kerala. I further declare that this dissertation has not led to the award of any degree and is an original record of my work during the period of March 2021 to May 2021.

Date: 12- 05-2021

Place: Kannur **Ms. Nimisha C**

CERTIFICATE

This is to certify that the dissertation entitled ***"Delineation of differences in saliva microbiota from healthy individuals using shotgun metagenomic approach"*** submitted by **Ms. Nimisha C** (Reg. No. BGS051927) to the Central University of Kerala in partial fulfillment of the requirements for the award of Master of Science in Genomic Science is based on research carried out by her under my guidance and supervision. It is further certified that this research work has not been submitted either partially or fully for any other degree or fellowship of this or any other University.



Dr. Ranjith Kumavath

Supervisor

Head of the Department

TGFβ superfamily genes during the induction of skeletal muscle progenitors from Human Pluripotent Stem Cells

Dissertation submitted to the Department of Genomics Science, Central University of Kerala

In Partial Fulfillment of the Requirement for the Award of the Degree of

MASTER OF SCIENCE (GENOMIC SCIENCE)

Submitted by

PARVATHY S

BGS 051924

Under the guidance and supervision of

DR. SMITA SUDHEER

Assistant Professor

Stem Cell Laboratory
Department of Genomic Science
School of Biological Science

Central University of Kerala

Kasaragod

MAY 2021

Department of Genomic Science

School of Biological Sciences, Central University of Kerala

CERTIFICATE

This is to certify that the dissertation entitled, **"TGFβ superfamily genes during the induction of skeletal muscle progenitors from Human Pluripotent Stem Cells"**, submitted to the Central University of Kerala in partial fulfilment of the requirements for the award of the Degree of Master of Science (Genomic Science), is a bonafide record of original work carried out by **Ms. PARVATHY S.**, under the guidance of **Dr. Smita Sudheer**, at the Stem Cell Laboratory, Department of Genomic Science, School of Biological sciences, Central University of Kerala, from 15/04/2021 to 13/05/2021. This project has not been submitted partially or fully for the award of any other degree or diploma title.

Signature of the Project Guide

Signature of the Head of the Department

Dr. Smita Sudheer
Assistant Professor Stem Cell Laboratory
Department of Genomic Science
Central University of Kerala

DECLARATION

I declare that I have authored the enclosed Master's Thesis under the guidance and supervision of **Dr. Smita Sudheer**, Assistant Professor, Stem Cell Laboratory, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod. I assure that this thesis is a result of my personal work and that I have not used sources or means for its completion without declaration in the text. All material that has been quoted either literally or by content is explicitly characterized. Furthermore, I declare that I have transferred the final digital text document to the commissioned supervisor. Beyond this, I assure that this bachelor thesis was not used, neither completely nor partially, for prior examination.

This work was done during the period from 15/04/2021 to 13/05/2021.

Kasaragod

PARVATHY S

BGS051928

WHOLE MITOCHONDRIAL GENOME SEQUENCING OF INDIAN GAUR (*Bos gaurus*) USING LONG RANGE PCR

A thesis submitted to
Central University of Kerala
in partial fulfillment of the requirements for the degree of

Master of Science
in
Genomic Science

By

Preethi Poshala

Reg. No.- BGS051929

Department of Genomic Science

School of Biological Science

Central University of Kerala

May 2021

CERTIFICATE

This is to certify that the project entitled "**Whole mitochondrial genome sequencing of Indian gaur (*Bos gaurus*) using long range PCR**" submitted in partial fulfillment of the requirements for the award of the degree of Master of Science in Genomic Science to Central University of Kerala, done by Ms. Preethi Poshala, registration number BGS051929, is an authentic work carried out by her at Central University of Kerala, Periye, Kasaragod, Kerala, under the guidance and supervision of Dr. M. Nagarajan, Assistant Professor during the period of March 2021- May 2021.

Signature of the HOD **Signature of the Supervisor**

Signature of the Examiner

Place: Periye
Date :

DECLARATION

I, Preethi Poshala, hereby declare that this project entitled "**Whole mitochondrial genome sequencing of Indian gaur using long range PCR**" which is being submitted as the MSc project of the final semester (Semester 4, 2021) is a record of the original work done by me under the guidance and supervision of Dr. M. Nagarajan, Assistant Professor, Department of Genomic Science, Central University of Kerala. The results embodied in this project have not formed the basis for the award of any Degree, Diploma, Associate-ship, Fellowship or a similar title to any candidate from any University to the best of my knowledge.

(Preethi Poshala)

Place: Periye
Date :

DISSERTATION

ON

STUDY ON DIFFERENTIAL EXPRESSION OF CYP450 GENE ACROSS DIFFERENT STAGES OF LEAF MATURITY IN *Lagerstroemia speciosa* L.

Submitted in partial fulfilment of the requirements of the

Degree

MASTER OF SCIENCE

IN

GENOMIC SCIENCE

By

R CHITHRA

BGS051930

Supervisor

DR. PADMESH P PILLAI

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCES

CENTRAL UNIVERSITY OF KERALA

DECLARATION

I do hereby declare that this work has been carried out by me under the guidance and supervision of Dr. Padmesh P Pillai, Associate Professor, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, and Kasaragod and that this work has not been submitted in full or in part for any other degree or certification.

KASARAGOD R CHITHRA

Date: May, 2021 BGS051930

CENTRAL UNIVERSITY OF KERALA

CERTIFICATE

This is to certify that the dissertation entitled "Study on differential expression of CYP450 gene across different stages of leaf maturity in *Lagerstroemia speciosa* "submitted by R CHITHRA, BGS051930 towards partial fulfilments for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod is based on research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

…….....

Dr. Padmesh Pillai (Supervisor)

Associate Professor & Head

Dept. of Genomic Science

School of Biological Sciences

Central University of Kerala

Microgravity Effects on Lox-5 gene and Human Organs

A dissertation submitted in partial fulfilment for the award of Degree of Master of Science in Genomic Science

MASTER OF SCIENCE IN GENOMIC SCIENCE

By

ERRA RAVI KUMAR

Reg.No: BGS051915

Under the guidance of

DR. A. MANICKAVELU

Associate Professor

Department of Genomic Science

Department of Genomic Science

School of Biological Sciences

Central University of Kerala

May, 2021

CERTIFICATE

This is to certify that the dissertation entitled “Microgravity effects on 5-lox gene and human organs” being submitted by Mr. ERRA RAVI KUMAR, (Reg.No: BGS051915) in partial fulfillment of the award of the degree of Master of Science in Genomic Science, is based on research carried out by her under my supervision at Dept. of Genomic Science, Central University of Kerala, Periye, Kasaragod, Kerala during the period of March 2021-April 2021. It is further certified that this work or part of this work has not been submitted elsewhere for any other degree.

Signature of supervisor **Signature of H.O.D**

Signature of Examiner

DECLARATION

I do hereby declare that the dissertation entitled **"Microgravity effects on 5-lox gene and human organs"** a Master's degree project under the guidance of Dr. A. MANICKAVELU, Associate Professor Department of Genomic Science, Central University of Kerala. This is an original record of my Master's Degree Project work which is submitted of the partial fulfilment of the requirement of Master's Degree.

Place: Central University of Kerala

Date: May, 2021

(Signature)

ERRA RAVI KUMAR

Reg.No: BGS051915

MSc Genomic Science

Central University of Kerala

COMPARATIVE MITOCHONDRIAL GENOME SEQUENCE ANALYSIS OF MILLIPEDE, *Anoplodesmus saussurii, Spirobolus bungii* and *Narceus annularus*

Submitted to

Central University of Kerala

In partial fulfilment of the
requirements of the degree

MASTER OF SCIENCE
IN
GENOMIC SCIENCE

SREENANDANA B
BGS051931

DEPARTMENT OF GENOMIC SCIENCE
SCHOOL OF BIOLOGICAL SCIENCES
MAY, 2021

CERTIFICATE

This is to certify that the project entitled "COMPARATIVE MITOCHONDRIAL GENOME SEQUENCE ANALYSIS OF MILLIPEDE, *Anoplodesmus saussurii*, *Spirobolus bungii* and *Narceus annularus"* submitted by **Sreenandana B (BGS051931)** towards partial fulfilment for the Degree of Master of Science in GenomicScience, Department of Genomic Science, School of Biological Science, Central University of Kerala, Kasaragod, Kerala, is based on the research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

Signature of supervisor

Dr. Tony Grace(Supervisor)
Assitant Professor
Dept of Genomic Science
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Head
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DECLARATION

I do hereby declare that this work has been carried out by me under the guidance and supervision of Dr. Tony Grace, Assistant Professor, Department of Genomic Science, School of Biological Science, Central University of Kerala, Kasaragod and that this work has not been submitted in full or in part of any other degree or certification.

Place: Periya Central University of Kerala

Date: May, 2021

SREENANDANA B

M. Sc. Genomic Science

Central University of Kerala

Reg. No. BGS051931

GENETIC UNDERSTANDING OF TYPE TWO DIABETES MELLITUS IN KERALA POPULATION

A Dissertation Report Submitted to

Central University of Kerala in partial fulfillment

of the requirements for the award of the Degree in

MASTER OF SCIENCE IN GENOMIC SCIENCE

Investigator

Miss. SWATHI RAVEENDRAN

(Reg.No: BGS051932)

Research supervisor

Dr. A. MANICKAVELU

Associate Professor

DEPARTMENT OF GENOMIC SCIENCE

SCHOOL OF BIOLOGICAL SCIENCE

CENTRAL UNIVERSITY OF KERALA

2019 – 2021

CERTIFICATE

This is to certify that the dissertation entitled " **Genetic understanding of type two diabetes mellitus in Kerala population** " submitted by **Mrs. SWATHI RAVEENDRAN, (Reg. No: BGS051932)** towards partial fulfillment for the Degree of Master of Science in Genomic Science, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod, is based on research carried out by her under my guidance and supervision. It is further certified that this dissertation or any part has not been submitted elsewhere for any other degree.

Dr. A. Manickavelu **……..…….**
Supervisor

Dr. Padmesh Pillai **…….**
HOD, Dept. of Genomic Science

DECLARATION

I do hereby declare that this thesis entitled "**Genetic understanding of type two diabetes mellitus in Kerala population**" has been carried out by me under the guidance and supervision of **Dr. A. Manickavelu**, Associate Professor, Department of Genomic Science, School of Biological Sciences, Central University of Kerala, Kasaragod, and that this work has not been submitted in full or in part for any other degree or diploma of any other University or Institute earlier.

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Periya, Kasaragod
Date: 12-/05-/2021

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