

A REPORT ON
DETECTION OF COPY NUMBER VARIATION IN *SMN1* GENE

SUBMITTED TO
DEPARTMENT OF BIOTECHNOLOGY
KANPUR UNIVERSITY



SUBMITTED BY-
ROHINI YADAV
M.Sc. Biotechnology

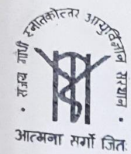
UNDER THE SUPERVISION OF
Dr. SHUBHA R. PHADKE

DIPARTMENT OF MEDICAL GENETICS



आत्मना सर्गो जितः
SANJAY GANDHI POST GRAGDUATE INSTITUTE OF
MEDICAL SCIENCES

LUCKNOW



Sanjay Gandhi Postgraduate Institute of Medical Sciences

Prof. S K Mishra MS, FACS
Dean
Professor and Head
Department of Endocrine Surgery

Raebareli Road,
Lucknow-226014 INDIA

PGI/DIR/RC/827/2019
Dated: 27.08.2019

To,

The Incharge
Department of Biotechnology
Institute of Bioscience & Biotechnology,
Chhatrapati Shahu Ji Maharaj University, Kanpur-208024

Sir,

Kindly refer to the training of **Ms. Rohini Yadav**, M.Sc. Biotechnology student, CSJMU, Kanpur, in the Department of Medical Genetics, SGPGI. I would like to inform you that **Ms. Rohini Yadav** has undergone training, in the Department of Medical Genetics, SGPGI, w.e.f. – 01.06.2019 to 31.07.2019.

During the above period her training was found to be satisfactory.

This is for your information & necessary action please.

Yours sincerely,

(PROF. S. K. MISHRA)
DEAN

Copy to:

- ✓ 1. Ms. Rohini Yadav, D/o-Mr. Vansh Gopal Yadav, H. No.-46, Bharatpura Chirgaon, Jhansi-284301.
2. Head, Department of Medical Genetics, SGPGI.

A REPORT ON
RECURRENT SPONTANEOUS ABORTION BY KARYOTYPING OF HUMAN BLOOD

SUBMITTED TO

DEPARTMENT OF BIOTECHNOLOGY
KANPUR UNIVERSITY



SUBMITTED BY-
AKANSHA PANDEY
M.Sc. Biotechnology

UNDER THE SUPERVISSION OF
Dr. SHUBHA R. PHADKE
DIPARTMENT OF MEDICAL GENETICS



आत्मना सर्गो जितः
SANJAY GANDHI POST GRAGDUATE INSTITUTE OF
MEDICAL SCIENCES

LUCKNOW



Sanjay Gandhi Postgraduate Institute of Medical Sciences

Prof. S K Mishra MS, FACS
Dean
Professor and Head
Department of Endocrine Surgery

Raebareli Road,
Lucknow-226014 INDIA

PGI/DIR/RC/825/2019
Dated: 27.08.2019

To,

The Incharge
Department of Biotechnology
Institute of Bioscience & Biotechnology,
Chhatrapati Shahu Ji Maharaj University, Kanpur-208024

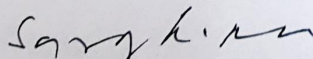
Sir,

Kindly refer to the training of **Ms. Akansha Pandey**, M.Sc. Biotechnology student, CSJMU, Kanpur, in the Department of Medical Genetics, SGPGI. I would like to inform you that **Ms. Akansha Pandey** has undergone training, in the Department of Medical Genetics, SGPGI, w.e.f. – 01.06.2019 to 31.07.2019.

During the above period her training was found to be satisfactory.

This is for your information & necessary action please.

Yours sincerely,


(PROF. S. K. MISHRA)
DEAN

Copy to:

1. Ms. Akansha Pandey, D/o – Mr. Mukesh Narayan Pandey, H.No.-11E/21, Daduli, Kanpur Nagar-208022.
2. Head, Department of Medical Genetics, SGPGI.

A Project Report
on
Identification of intron 22 inversion in cases with severe hemophilia A
using LD-PCR

Submitted to

Chatrapati Sahu ji Maharaj
University, Kanpur



Submitted by
Neha Singh
M.Sc Biotechnology

Under the guidance of
Dr. Shubha Phadke

Department of Medical Genetics
Sanjay Gandhi Postgraduate Institute of medical sciences

Saxena



Lucknow
2019

Dr. Deepti Saxena
Assistant Professor
Department of Medical Genetics
Sanjay Gandhi Postgraduate Institute of Medical Sciences
Lucknow-226014 (U.P.) INDIA

Dr. Shubha R. Phadke
Professor & Head
Department of Medical Genetics
Sanjay Gandhi Postgraduate Institute of Medical Sciences
Lucknow-226014 (U.P.) INDIA

ACKNOWLEDGEMENT

I am extremely grateful to **Dr. Varsha Gupta**, Head of Department, Department of Biochemistry, **KANPUR University** who was generous enough to grant me chance of training at Sanjay Gandhi Post-Graduate Institute of Medical Sciences, Lucknow (U.P.)

I am very much indebted to **Prof. (Dr.) Shubha R. Phadke** Head of Department (Medical Genetics) SGPIMS, Lucknow for providing me this opportunity and for her constant encouragement throughout the project.

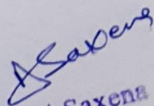
I simply feel myself blessed being provided with an advisor like **Prof (Dr.) Deepti Saxena**, Department of Medical Genetics, Sanjay Gandhi Post-Graduate Institute of Medical Science. I am also grateful to **Ms. Suzena Masih**, Research scholar, Department of Medical Genetics, Sanjay Gandhi Post-Graduate Institute of Medical Science for her constant guidance and sustained co-operation, interest and encouragement throughout the project.

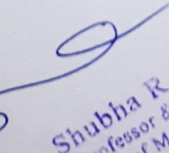
Sincerely I express my deep feeling to my friends and colleagues who rendered a helping hand in the hour of need. I am grateful to my parents for their moral support and personal sacrifice to see me through this project.

Place- Lucknow

Date- 6/08/2019

Neha Singh


Dr. Deepti Saxena
Assistant Professor
Department of Medical Genetics
Sanjay Gandhi Post Graduate
Institute of Medical Sciences
Lucknow-226014 (U.P.) INDIA


Dr. Shubha R. Phadke
Professor & Head
Department of Medical Genetics
Sanjay Gandhi Post Graduate
Institute of Medical Sciences
Lucknow-226014 (U.P.) INDIA

A REPORT ON
ISOLATION AND SCREENING OF BACTERIA FROM
ORGANIC COMPOST

SUBMITTED TO
DEPARTMENT OF BIOTECHNOLOGY
CHHATRAPATI SHIVAJI MAHARAJ UNIVERSITY



SUBMITTED BY-
KISLAY MAURYA
Roll No.-8061362
M.Sc. BIOTECHNOLOGY

UNDER THE SUPERVISION OF
MR. GYANESHWAR PATEL
(RESEARCH ASSOCIATE)



CHAPERON BIOTECH
KANPUR



Chaperon Biotech Pvt. Ltd.

A Place of Discovery

Established Under Companies Act, 1956 (No. 1 of 1956)
Registered by Ministry of Corporate Affairs Govt. of India

Enroll. No-CBK/A543/20/02

Date-20-02-2020

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. KISLAY MAURYA S/O Mr. PRABHAT KUMAR MAURYA doing M.Sc in Biotechnology from C.S.J.M UNIVERSITY KANPUR, (U.P) has undergone three month project on "*Screening & Isolation of bacteria from organic compost*". He has done his project work for duration of three month starting from 20.06.2019 to 19.09.2019.

During training we found, he was very sincere, devoted and diligent towards training.

We wish his all the success for future career.

Mr Gyaneshwar Patel
(Project Guide)

Mr. Saurabh Singh
(C.E.O)



Note- For confirmation visit on www.chaperonbiotech.com

Reg. office:
133/152, Transport Nagar,
Kanpur (U.P)
Pin- 208023

Office:
117/k/71 Nita Tower, Sarvoday Nagar,
Near Deoki Chauraha Kanpur (U.P)
Pin-208005

Contact No:
0512-6052516
E-mail- office@chaperonbiotech.com
Web site: - www.chaperonbiotech.com

**A PROJECT REPORT
ON**

**Evaluation of phenolic, flavonoid and antioxidant activity in
callus culture of *Terminalia arjuna* (Roxb.) Wight & Arnot**



**In Partial Fulfilment for Award of the Degree of
“Master of Science” in “Biotechnology”**

Submitted To,

Dr.Madhulika Singh

Submitted By,

Kajal Dwivedi

Roll No. 8061361

M.SC. IV semester

**Department of Biotechnology,
C.S.J.M. University, Kanpur**

Gram : UNIVERSITY

Phone : { 2570450
2570301

छत्रपति शाहू जी महाराज विश्व विद्यालय, कानपुर

CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY, KANPUR



कल्यानपुर, कानपुर
KALYANPUR, KANPUR

Ref. X

Dated 26/10/2020

CERTIFICATE

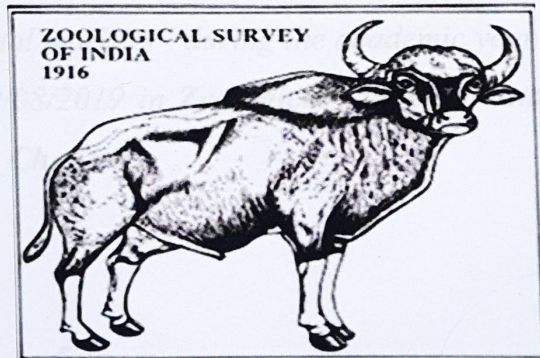
The research work entitled "Evaluation of phenolic, flavonoid and antioxidant activity in callus culture of *Terminalia arjuna* (Roxb.) Wight & Arnot" for partial fulfillment of M.Sc. Degree has been carried out by Miss Kajal Dwivedi during June 2019 to 15 March, 2020, under my supervision in the Department of Biotechnology, Institute of Biosciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Kalyanpur, Kanpur. This work is original and has not been submitted so far in any Degree or Diploma of other University.

Dr. Madhulika Singh
Department of Biotechnology,
CSJM University,
Kanpur

A REPORT ON
Genetic relationship of Insects using Mitochondrial
Markers

ABHILASHA SINGH
ROLL NUM: 80611351
MSC BIOTECHNOLOGY FINAL YEAR
CHATTRA PATI SAHU JI MAHARAJ KANPUR U.P

Report submitted to:
Dr. RANJANA, SCIENTIST-D
DNA BARCODE LAB



ZOOLOGICAL SURVEY OF INDIA, SOUTHERN REGIONAL CENTER
130, NEAR SANGEETA; SANTHOME HIGH ROAD CHENNAI
TAMIL NADU 6000024



Zoological Survey of India

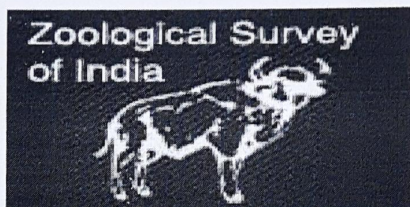
CERTIFICATE

*This is to certify the student ABHILASHA SINGH of M.Sc BIOTECHNOLOGY from Kanpur University has been successfully completed her summer training of "Genetic relationship of insects using mitochondrial markers" during the academic year of 2019 from 10/06/2019 to 09/08/2019 in **Zoological Survey of India, Southern Regional Centre, Chennai.***

Dr. RANJANA BHASKAR
Scientist "D"

Dr. K.A. SUBRAMANIAN
Scientist "E" & Officer-in Charge
ZSI/SRC, Chennai

A SUMMER TRAINING REPORT
ON
MOLECULAR STUDIES ON FISHES
Completed at
ZOOLOGICAL SURVEY OF INDIA [ZSI]
SOUTHERN REGION CENTER, CHENNAI-28



Duration
10th June to 9th August, 2019

Submitted by
POOJA SINGH
ROLL NO-8061371

M.Sc Biotechnology, 2nd year(4th semester)

student of



INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY
CHHATRAPATI SAHUJI MAHARAJ UNIVERSITY
KANPUR (U.P.) INDIA



Zoological Survey of India

CERTIFICATE

*This is to certify the student Pooja Singh of M.Sc BIOTECHNOLOGY from Kanpur University has been successfully completed her summer training on **Molecular Studies of Fishes** during the academic year of 2019 from 10/06/2019 to 09/08/2019 in **Zoological Survey of India, Southern Regional Centre, Chennai.***

Dr. RANJANA BHASKAR
Scientist "D"

Dr. K. A. SUBRAMANIAN
Scientist "E" & Officer-in Charge
ZSI/SRC, Chennai

**A REPORT ON
MOLECULAR BARCODING OF UNGULATES**

MERCY SARAL

ROLL NUM: 8061369

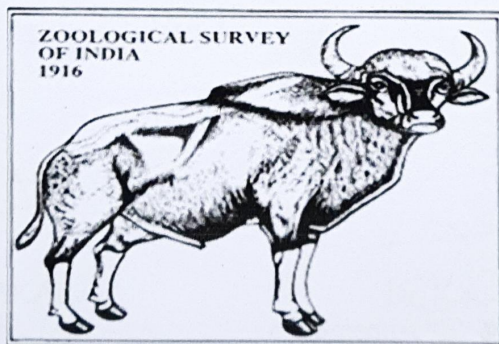
MSC BIOTECHNOLOGY FINAL YEAR

CHATTRA PATI SAHU JI MAHARAJ KANPUR U.P

Report submitted to:

Dr. RANJANA, SCIENTIST-D

DNA BARCODE LAB



**ZOOLOGICAL SURVEY OF INDIA, SOUTHERN REGIONAL CENTER
130, NEAR SANGEETA; SANTHOME HIGH ROAD CHENNAI
TAMIL NADU 6000028**



Zoological Survey of India

CERTIFICATE

*This is to certify the student MERCY SARAL of M.Sc BIOTECHNOLOGY from Kanpur University has been successfully completed her summer training of “Molecular Barcoding of Ungulates” during the academic year of 2019 from 10/06/2019 to 09/08/2019 in **Zoological Survey of India, Southern Regional Centre, Chennai.***

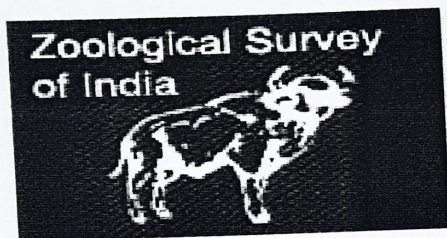
Dr. RANJANA BHASKAR
Scientist “D”

Dr. K.A. SUBRAMANIAN
Scientist “E” & Officer-in Charge
ZSI/SRC, Chennai

A SUMMER TRAINING REPORT
ON
MOLECULAR STUDIES ON INSECTS

Completed at
ZOOLOGICAL SURVEY OF INDIA [ZSI]

SOUTHERN REGION CENTER, CHENNAI-28



Duration

10th June to 9th August, 2019

Submitted by

TANIYA SRIVASTAVA

Roll number- 8061376

M.Sc Biotechnology, 2nd year(4th semester)

Student of



CHHATRAPATI SHAHUJI MAHARAJ UNIVERSITY

KANPUR (U.P.) INDIA



Zoological Survey of India

CERTIFICATE

*This is to certify the student Taniya Srivastava of M.Sc BIOTECHNOLOGY from Kanpur University has been successfully completed her summer training of **Molecular Studies on Insects** during the academic year of 2019 from 10/06/2019 to 09/08/2019 in **Zoological Survey of India, Southern Regional Centre, Chennai.***

Dr. RANJANA BHASKAR
Scientist "D"

Dr. K.A. SUBRAMANIAN
Scientist "E" & Officer-in Charge
ZSI/SRC, Chennai

NEUROPROTECTIVE EFFECT OF MUCUNA PRURIENS IN MPTP INTOXICATED PARKINSON'S MOUSE MODEL



PROJECT REPROT SUBMITTED

**IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE AWARD
OF THE DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY**

**BY
SHWETA SINGH
M.Sc. BIOTECHNOLOGY
FINAL YEAR (4th Semester)**

**DEPARTMENT OF BIOSCIENCE & BIOTECHNOLOGY
CHHATRAPATI SHAHUJI MAHARAJ UNIVERSITY, KANPUR**

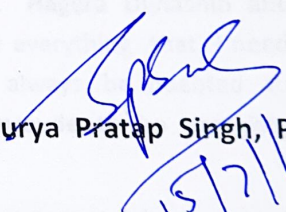
2018-2020

**UNDER THE GUIDANCE OF
Dr. SURYA PRATAP SINTGH
Professor**

**DEPARTMENT OF BIOCHEMISTRY, FACULTY OF SCIENCE
BANARAS HINDU UNIVERSITY
VARANASI-221005**

CERTIFICATE

It is certified that dissertation report entitled " **Neuroprotective effect of mucuna pruriens in MPTP in toxicated Parkinson's mouse model**" which is being submitted by Shweta Singh, in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE IN BIOTECHNOLOGY of Chhatrapati Shahu Ji Maharaj University is a record of candidate's own work carried out by her under my supervision and guidance. The matter embodied in this report has not been submitted for award of my other degree.


Surya Pratap Singh, Ph.D.
15/7/19

A REPORT ON
ASXL3 DISTURBS TRANSCRIPTIONAL REGULATION IN BAINBRIDGE
ROPER'S SYNDROME IDENTIFIED THROUGH RNA SEQUENCING

SUBMITTED TO
DEPARTMENT OF BIOTECHNOLOGY
KANPUR UNIVERSITY



SUBMITTED BY-
RAJANI SINGH
M.Sc. Biotechnology

UNDER THE SUPERVISION OF
Dr. SHUBHA R. PHADKE

DEPARTMENT OF MEDICAL GENETICS



आत्मना सर्गो जितः
SANJAY GANDHI POST GRADUATE INSTITUTE OF
MEDICAL SCIENCES

LUCKNOW



Sanjay Gandhi Postgraduate Institute of Medical Sciences

Prof. S K Mishra MS, FACS
Dean
Professor and Head
Department of Endocrine Surgery

Raebareli Road,
Lucknow-226014 INDIA

PGI/DIR/RC/020/2019

Dated: 27.06.2019

To,

The Incharge
Department of Biotechnology
Institute of Bioscience & Biotechnology,
Chhatrapati Shahu Ji Maharaj University, Kanpur-208024

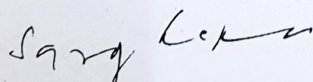
Sir,

Kindly refer to the training of **Ms. Rajani Singh**, M.Sc. Biotechnology student, CSJMU, Kanpur, in the Department of Medical Genetics, SGPGI. I would like to inform you that **Ms. Rajani Singh** has undergone training, in the Department of Medical Genetics, SGPGI, w.e.f. – 01.06.2019 to 31.07.2019.

During the above period her training was found to be satisfactory.

This is for your information & necessary action please.

Yours sincerely,


(PROF. S. K. MISHRA)
DEAN

Copy to:

- ✓ Ms. Rajani Singh, D/o – Mr. Ajay Singh, Vill-Gupsad, Post-Bharthipur, Dist.-Sultanpur-228001.
2. Head, Department of Medical Genetics, SGPGI.

A PROJECT REPORT
ON
Phytochemical production from callus and cell suspension
culture of *Terminalia arjuna* (Roxb.) Wight & Arnot



In Partial Fulfilment for Award of the Degree of
“Master of Science” in “Biotechnology”

Submitted To,

Dr.Madhulika singh

Submitted By,

Sonam Maurya

Roll No. 8061374

M.SC. IV semester

Department of Biotechnology,
C.S.J.M. University, Kanpur

Gram : UNIVERSITY

Phone : { 2570450
2570301

छत्रपति शाहू जी महाराज विश्व विद्यालय, कानपुर

CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY, KANPUR



कल्यानपुर, कानपुर
KALYANPUR, KANPUR

Ref.X.....

Dated..26/10/20.20

CERTIFICATE

The research work entitled “Phytochemical production from callus and cell suspension culture of *Terminalia arjuna* (Roxb.) Wight & Arnot” for partial fulfillment of M.Sc. Degree has been carried out by Miss Sonam Maurya during June 2019 to 15 March, 2020, under my supervision in the Department of Biotechnology, Institute of Biosciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Kalyanpur, Kanpur. This work is original and has not been submitted so far in any Degree or Diploma of other University.

Dr. Madhulika Singh
Department of Biotechnology,
CSJM University,
Kanpur

**A PROJECT REPORT
ON**

**“Screening & characterization of protease producing *Bacillus subtilis*
And the effect of temperature on protease enzyme”**



**In Partial Fulfilment for Award of the Degree of
“Master of Science” in “Biotechnology”**

Submitted by

Julkar nain

Roll No. 8061360

M.SC. IV semester

Department of Biotechnology,

C.S.J.M. University, Kanpur

छत्रपति शाहू जी महाराज विश्वविद्यालय, कानपुर
CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY, KANPUR



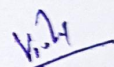
कल्याणपुर, कानपुर
KALYANPUR, KANPUR

Ref. No. DBT/IBSBT/CSMU/2020/004

Dated 15/10/2020

CERTIFICATE

The research work entitled "Screening & characterization of protease producing *Bacillus subtilis* And the effect of temperature on protease enzyme": for partial fulfilment of M.Sc. Degree has been carried out by **Mr. Julkar Nain** during August 2019 to March 2020. under my supervision in the Department of Biotechnology, Institute of Biosciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Kalyanpur, Kanpur. This work is original and has not been submitted so far in any Degree or Diploma of other University.


(Dr. Vishal Chand)

Supervisor

**A REPORT ON
β THALASSEMIA**

**SUBMITTED TO
DEPARTMENT OF BIOTECHNOLOGY
CSJM UNIVERSITY, KANPUR**



**SUBMITTED BY-
UMMAI AIMAN SIDDIQUE
M.Sc Biotechnology 1st YEAR
UNDER THE SUPERVISION OF
PROF. SHUBHA RAO PHADKE
(H.O.D MEDICAL GENETICS)
DEPARTMENT OF MEDICAL GENETICS**



**SANJAY GANDHI POST GRADUATE INSTITUTE OF MEDICAL
SCIENCES
LUCKNOW**



Sanjay Gandhi Postgraduate Institute of Medical Sciences

Prof. S K Mishra MS, FACS

Dean

Professor and Head

Department of Endocrine Surgery

Raebareli Road,
Lucknow-226014 INDIA

PGI/DIR/RC/026/2019
Dated: 27. 08. 2019

To,

The Incharge

Department of Biotechnology

Institute of Bioscience & Biotechnology,

Chhatrapati Shahu Ji Maharaj University, Kanpur-208024

Sir,

Kindly refer to the training of Ms. **Ummi Aiman Siddique**, M.Sc. Biotechnology student, CSJMU, Kanpur, in the Department of Medical Genetics, SGPGI. I would like to inform you that Ms. **Ummi Aiman Siddique** has undergone training, in the Department of Medical Genetics, SGPGI, w.e.f. – 10.06.2019 to 09.08.2019.

During the above period her training was found to be satisfactory.

This is for your information & necessary action please.

Yours sincerely,

(PROF. S. K. MISHRA)

DEAN

Copy to:

- ✓ Ms. **Ummi Aiman Siddique**, L-224, Awas Vikas Keshvpuram, Kalyanpur, Kanpur-208017.
- 2. Head, Department of Medical Genetics, SGPGI.

**A PROJECT REPORT
ON**

**“Screening & characterization of protease producing *Bacillus subtilis*
And the effect of pH on protease enzyme”**



**In Partial Fulfilment for Award of the Degree of
“Master of Science” in “Biotechnology”**

Submitted by

Krishna Kant Dobey

Roll No. 8061368

M.SC. IV semester

Department of Biotechnology,

C.S.J.M. University, Kanpur

Gram : UNIVERSITY

Phones [2570301
2570263
2570450

छत्रपति शाहू जी महाराज विश्वविद्यालय, कानपुर
CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY, KANPUR




कल्याणपुर, कानपुर
KALYANPUR, KANPUR

Ref. No. DBT / 12501 / CSJMU / 2020 / 002

Dated 15/10/2020

CERTIFICATE

The research work entitled "Screening & characterization of protease producing *Bacillus subtilis* And the effect of pH on protease enzyme": for partial fulfilment of M.Sc. Degree has been carried out by **Mr. Krishna Kant Dobey** during August 2019 to March 2020. under my supervision in the Department of Biotechnology. Institute of Biosciences and Biotechnology, ChhatrapatiShahuJiMaharaj University, Kalyanpur, Kanpur. This work is original and has not been submitted so far in any Degree or Diploma of other University.


(Dr. Vishal Chand)

Supervisor