

(A CENTRAL UNIVERSITY) Suryamaninagar, Agartala, Tripura – 799 022

Webpage: www.tripurauniversity.in

Dr Shaon Ray Chaudhuri Associate Professor Department of Microbiology

Ref. No: Certficate/MicroTU/15092020/05

To whom it may concern

This is to certify that Mr Amar Babu Debbarma, student of 4th Semester MSc in Molecular Biology and Bioinformatics, has worked under my supervision during July 2019 till June 2020 for his final year MSc project entitled "Understanding the Epiphytic Microbial Population of Scented Rice". He has been sincere, and the work is satisfactory.

Thanking You, Sincerely Yours,

Date: 15th September 2020



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Dr Shaon Ray Chaudhuri Associate Professor Department of Microbiology

Ref. No: Certficate/MicroTU/15092020/04

To whom it may concern

This is to certify that Ms Dipannita Bhattacharjee, student of 4th Semester MSc in Microbiology has worked under my supervision during July 2019 till June 2020 for her final year MSc project entitled "Understanding the molecular mechanism operating inside a biofilm reactor converting dairy wastewater into biofertilizer". She has been sincere, and also presented her work at a state level competition. The work has been communicated to an Indian journal and is satisfactory.

Thanking You, Sincerely Yours,

Date: 15th September 2020



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Dr Shaon Ray Chaudhuri Associate Professor Department of Microbiology

Ref. No: Certficate/MicroTU/15092020/03

To whom it may concern

This is to certify that Mr Ronald Jamatia, student of 4th Semester MSc in Microbiology has worked under my supervision during July 2019 till June 2020 for his final year MSc project entitled "Microbial finishing of Ramie Fibre". The work is part of a publication that came out in Biotechnology Reports this year (2020) and a book chapter that has been accepted (Apple Academic Press). His work is satisfactory.

Thanking You, Sincerely Yours,

Date: 15th September 2020



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Dr Shaon Ray Chaudhuri Associate Professor Department of Microbiology

Ref. No: Certficate/MicroTU/15092020/02

To whom it may concern

This is to certify that Ms Shashi Prabha Yadav, student of 4th Semester MSc in Microbiology has worked under my supervision during July 2019 till June 2020 for her final year MSc project entitled "Isolation and characterization of phosphate removing bacterial strain for environmental origin with Plant Growth Promoting properties". She has been sincere, and the work is satisfactory.

Thanking You, Sincerely Yours,

Date: 15th September 2020



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Webpage: <u>www.tripurauniversity.in</u>

Dr Shaon Ray Chaudhuri Associate Professor Department of Microbiology

Ref. No: Certficate/MicroTU/15092020/01

To whom it may concern

This is to certify that Mr Tuhin Saha, student of 4th Semester MSc in Microbiology has worked under my supervision during July 2019 till June 2020 for his final year MSc project entitled "Assessing the impact of bio fertilizer application on Aloe vera, Lemongrass and cassava plantation". He has been extremely sincere, hardworking and dedicated. He trained himself well and also presented his work at a state level competition and secured position. The work has been communicated to an international journal and is extremely satisfactory.

Thanking You, Sincerely Yours,

Date: 15th September 2020



सुक्ष्मजैविकी विभाग Department of Microbiology त्रिपुरा विश्वविद्यालय Tripura University

(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) दूरभाष Phone: +91-9650787508 (M) ई-मेल E-Mail: ashutoshkumar@tripurauniv.in वेबसाइट Website:https://www.tripurauniv.ac.in

Date: 15/09/2020

To whom it may concern

This is to certify that Ms. Jueli Debbarma, a student of M.Sc. Microbiology has carried out the project, entitled "Analysis of proteomic adaptation in the replication machinery of thermophilic species of mycobacteria" under my supervision and guidance from May 16, 2019 till June 2020 in partial fulfillment of the requirement for obtaining M.Sc. degree in Microbiology from Tripura University. She has been sincere, and the work is satisfactory.

Thanking you.

With Best Regards,

Dr. Ashutosh Runa Assistant Professor Department of Microbiology Tripura University Suryamaninagar-799022

Dr. Ashutosh Kumar



सूक्ष्मजैविकी विभाग Department of Microbiology त्रिपुरा विश्वविद्यालय Tripura University

(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) दूरभाष Phone: +91-9650787508 (M) ई-मेल E-Mail: ashutoshkumar@tripurauniv.in वेबसाइट Website:https://www.tripurauniv.ac.in

Date: 15/09/2020

To whom it may concern

This is to certify that Ms. Jushi Debbarma, a student of M.Sc. Microbiology has carried out the project, entitled "Analyses of protein adaptation in the replication machinery of Psychrophilic species of *Pseudomonas sp.*" under my supervision and guidance from May 16, 2019 till June 2020 in partial fulfillment of the requirement for obtaining M.Sc. degree in Microbiology from Tripura University. She has been sincere, and the work is satisfactory.

Thanking you.

With Best Regards,

Dr. Ashutosh Runa Assistant Professor Department of Microbiology Tripura University Suryamaninagar-799022

Dr. Ashutosh Kumar



सुक्ष्मजैविकी विभाग Department of Microbiology त्रिपुरा विश्वविद्यालय Tripura University

(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) दूरभाष Phone: +91-9650787508 (M) ई-मेल E-Mail: ashutoshkumar@tripurauniv.in वेबसाइट Website:https://www.tripurauniv.ac.in

Date: 15/09/2020

To whom it may concern

This is to certify that Mr. Satyajit Das, a student of M.Sc. Microbiology has carried out the project, entitled "Comparative Proteomic Analysis of Replication Machinery of Slow and Rapidly Growing Species of Mycobacterium" under my supervision and guidance from May 16, 2019 till June 2020 in partial fulfillment of the requirement for obtaining M.Sc. degree in Microbiology from Tripura University. He has been sincere, and the work is satisfactory.

Thanking you.

With Best Regards,

Dr. Ashutosh Runa Assistant Professor Department of Microbiology Tripura University Suryamaninagar-799022

Dr. Ashutosh Kumar



सूक्ष्मजैविकी विभाग Department of Microbiology त्रिपुरा विश्वविद्यालय Tripura University

(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) दूरभाष Phone: +91-9650787508 (M) ई-मेल E-Mail: ashutoshkumar@tripurauniv.in वेबसाइट Website:https://www.tripurauniv.ac.in

Date: 15/09/2020

To whom it may concern

This is to certify that Ms. Sumitra Lodh, a student of M.Sc. Microbiology has carried out the project, entitled "Systematic analysis of Proteins of SenX3/RegX3f Regulons of Mycobacterium" tuberculosis" under my supervision and guidance from May 16, 2019 till June 2020 in partial fulfillment of the requirement for obtaining M.Sc. degree in Microbiology from Tripura University. She has been sincere, and the work is satisfactory.

Thanking you.

With Best Regards,

Dr. Ashutosh Runa Assistant Professor Department of Microbiology Tripura University Suryamaninagar-799022

Dr. Ashutosh Kumar



(A CENTRAL UNIVERSITY)

Suryamaninagar, Agartala, Tripura – 799 022

Webpage: www.tripurauniversity.in

Dr. Bipin Kumar Sharma
Assistant Professor and HOD (I/C)
Department of Microbiology

Email: bksharma@tripurauniv.in

Phone: 09862175788

CERTIFICATE

To whomsoever it may concern

This is to certify that Ms. Soumyadip Ghosh a student of M.Sc Microbiology, Tripura University, roll number: 1806200013 has carried out the project work embodied in the M.Sc dissertation entitled "Cloning of the gene and expression as recombinant protein of the cyclic-di-AMP biosynthetic enzyme diadenylate cyclase (DacA) of *Mycobacterium tuberculosis*" under the joint supervision and guidance of me and Dr. Bappaditya Dey, Scientist-E, National Institute of Animal Biotechnology, Hydrabad, Telegana for a period of one year (June 2019-May 2020). His/ Her project report is found satisfactory in partial fulfilment for the award of MSc in Microbiology.

Dr. Bipin Kumar Sharma

Department of Microbiology



(A CENTRAL UNIVERSITY) Suryamaninagar, Agartala,

Tripura - 799 022 Webpage: www.tripurauniversity.in

Dr. Bipin Kumar Sharma Assistant Professor and HOD (I/C) Department of Microbiology

Email: bksharma@tripurauniv.in

Phone: 09862175788

CERTIFICATE

To whomsoever it may concern

This is to certify that Ms. Neha Kaushik a student of M.Sc. Microbiology, Tripura University, roll number: 1806200018 has carried out the project work embodied in the M.Sc. dissertation entitled "To study the effects of some traditional herbs as a means to reduce the microbial load in the oral cavity and to reduce periodontal (gum) diseases "under my supervision and guidance for a period of one year (June 2019-May 2020). Her project report is found satisfactory in partial fulfilment for the award of MSc in Microbiology.

Assistant Professor

Dr. Bipin Kurhar Sharma

Department of No.



(A CENTRAL UNIVERSITY) Suryamaninagar, Agartala, Tripura – 799 022

Webpage: www.tripurauniversity.in

Dr. Bipin Kumar Sharma Assistant Professor and HOD (I/C) **Department of Microbiology**

Email: bksharma@tripurauniv.in

Phone: 09862175788

CERTIFICATE

To whomsoever it may concern

This is to certify that Miss Manoj Kumar Satpati a student of M.Sc. Microbiology, Tripura University roll number:1806200002, has carried out the project work embodied in the M.Sc. dissertation entitled "Characterization of yeast strain having antimicrobial properties isolated from the traditional beverages of Tripura." under my supervision and guidance for a period of one year (June 2019-May 2020). His/Her project report is found satisfactory in partial fulfilment for the award of MSc in Microbiology.

> Assistant Professor Assistant Professional Assistant Professional



(A CENTRAL UNIVERSITY) Suryamaninagar, Agartala, Tripura – 799 022

Dr. Bipin Kumar Sharma

Assistant Professor and HOD (I/C)

Department of Microbiology

Email: bksharma@tripurauniv.in

Phone: 09862175788

CERTIFICATE

To whomsoever it may concern

This is to certify that Ms. Bratati Paul a student of M.Sc. Microbiology, Tripura University, roll number: 1806200008 has carried out the project work embodied in the M.Sc. dissertation entitled "Characterization of yeast strain having antimicrobial properties, isolated from local alcoholic beverages of Tripura" under my supervision and guidance for a period of one year (June 2019-May 2020). His/ Her project report is found satisfactory in partial fulfilment for the award of MSc in Microbiology.

Dr. Bipin Kumar Sharma

Department of Microbiology



(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) वेबसाइट Website:https://www.tripurauniv.ac.in

Ref. No.: ThesisCertificate/MicroTU-AC/10052020/01

14th September 2020

CERTIFICATE

To whom it may concern

This is to certify that Ms. Khyati Goswami, Roll number 1806200001, a student of M.Sc. Microbiology, has carried out the project work embodied in the present entitled "Understanding the Provisions of Patentability of dissertation. Microorganisms: A study comparing India with the United States of America and the European Union" under my supervision and guidance for a period of one year (June 2019 - May 2020). Her project report is found satisfactory in partial fulfillment for the award of M.Sc. in Microbiology.

Dr. Ashwini Chauhan Dr. Ashwini Chauhan Assistant Professor
Assistant Professor Assistant Professor, Tripura University
Department of Microbiology,

Tripura University (A Central University),

India.



(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) वेबसाइट Website:https://www.tripurauniv.ac.in

Ref. No.: ThesisCertificate/MicroTU-AC/10052020/01

14th September 2020

CERTIFICATE

To whom it may concern

This is to certify that Mr. Albert Reang, Roll number 1806200007, a student of M.Sc. Microbiology, has carried out the project work embodied in the present dissertation, entitled "To understand biofilm-associated infections in Central Venous Catheters inserted in patients in Northeast, India and, developing suitable diagnostic marker for biofilms" under my supervision and guidance for a period of one year (June 2019 - May 2020). His project report is found satisfactory in partial fulfillment for the award of M.Sc. in Microbiology.

Dr. Ashwini Chauhan Dr. Ashwini Chauhan Assistant Professor
Assistant Professor Assistant Professor, Tripura University
Department of Microbiology,

Tripura University (A Central University),

India.



(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) वेबसाइट Website:https://www.tripurauniv.ac.in

Ref. No.: ThesisCertificate/MicroTU-AC/10052020/01

14th September 2020

CERTIFICATE

To whom it may concern

This is to certify that **Ms. Kakali Noatia**, Roll number 1806200003, a student of M.Sc. Microbiology, has carried out the project work embodied in the present dissertation, entitled "Development of natural therapeutics to combat biofilm infections using medicinal plants of North-East India" under my supervision and guidance for a period of one year (June 2019 - May 2020). Her project report is found satisfactory in partial fulfillment for the award of M.Sc. in Microbiology.

Dr. Ashwini Chauhan
Assistant Professor
Assistant Professor,
Assistant Professor,
Assistant Professor,
Tripura University
Tripura University
Tripura University (A Central University),

India.



(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) वेबसाइट Website:https://www.tripurauniv.ac.in

Ref. No.: ThesisCertificate/MicroTU-AC/10052020/01

14th September 2020

CERTIFICATE

To whom it may concern

This is to certify that **Mr. Ranjan Daimiri**, Roll number 1806200012, a student of M.Sc. Microbiology, has carried out the project work embodied in the present dissertation, entitled "**To study the patentability of genes and proteins specially with reference to India compared to US and Europe**" under my supervision and guidance for a period of one year (June 2019 - May 2020). His project report is found satisfactory in partial fulfillment for the award of M.Sc. in Microbiology.

Dr. Ashwini Chauhan
Dr. Ashwini Chauhan
Assistant Professor
Assistant Professor,
Assistant Professor,
Tripura University
Tripura University
Tripura University (A Central University),
India.



(एक केन्द्रीय विश्वविद्यालय A Central University) सूर्यमणिनगर Suryamaninagar, अगरतला Agartala त्रिपुरा Tripura -799022 (भारत India) वेबसाइट Website:https://www.tripurauniv.ac.in

Ref. No.: ThesisCertificate/MicroTU-AC/10052020/01

14th September 2020

CERTIFICATE

To whom it may concern

This is to certify that **Mr. Deepraj Saha**, Roll number 1806170016, a student of M.Sc. Molecular Biology and Bioinformatics, has carried out the project work embodied in the present dissertation, entitled "SYNTHESIS OF ZINC OXIDE NANOPARTICLES AND ITS APPLICATION IN TREATMENT OF SEWAGE WATER FROM DIFFERENT SOURCES OF AGARTALA" under my supervision and guidance for a period of one year (June 2019 - May 2020). His project report is found satisfactory in partial fulfillment for the award of M.Sc. in Molecular Biology and Bioinformatics.

Dr. Ashwini Chauhan
Assistant Professor
Assistant Professor, Tripura University
Department of Microbiology,
Tripura University (A Central University),
India.