

सी.एस.आई.आर..जीनोमिकी और समवेत जीवविज्ञान संस्थान (वैज्ञानिक तथा औद्योगिक अनुसंघान परिषद्, भारत सरकार) दिल्ली विश्वविद्यालय परिसर, माल रोड, दिल्ली–110007 भारत

### **CSIR-Institute of Genomics & Integrative Biology**

(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH, GOVT. OF INDIA)
DELHI UNIVERSITY CAMPUS, MALL ROAD, DELHI-110007, INDIA

#### CERTIFICATE

This is to certify that the dissertation work entitled "Study on evolution of Clostridium species using distance matrix" submitted to the Department of Computer science, Tezpur Central University, Tezpur, towards partial fulfillment of the requirement for the award of the Degree of Master of Computer Application has been done by Mr. Mayank Gaur, during the period of 12<sup>th</sup> Jan to 21<sup>st</sup> May 2014 at the CSIR-Institute of Genomic and Integrative Biology (IGIB), Delhi University Campus, Mall Road, Delhi-110007, under the supervision of Dr. V. C Kalia and myself. To the best of our knowledge, the present dissertation is the result of his original work and contribution and no part of the dissertation has ever been submitted for any other purpose at any University/Institute. He has actively participated in different studies carried out in the laboratory. He has good aptitude for research and I wish him success in all his future endeavors.

Dr. Malabíka Datta

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### सी.एस.आई.आर..जीनोमिकी और समवेत जीवविज्ञान संस्थान

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I wish him success in future.

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Dr. V. C. KALIA (Chief Scientist) डा. वी. सी. कालिया / Dr. ∀. C. Kalla

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Date: 26-May-2014

Place: Tezpur

M. Dn#5

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| A VICRALIA)  |
| Supervisor Scientist  CSIR-IGIR Delhi  |



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Date: 26-May-2014

Place: Tezpur

Signature of HOD Dr. Shyamanta M Hazarika HOD, Department of CSE Tezpur University, Tezpur



# **Department of Computer Science and Engineering**

#### **Tezpur University**

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Internal Examiner

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Declaration

I hereby declare that the dissertation, entitled "Study on evolution of Clostridium

species using distance matrix" submitted to the Department of Computer

Science, Tezpur University, Tezpur, in the partial fulfillment of the requirement

for the award of the Degree of Master of Computer Application is record work

done by Me, during the period of 12th Jan to 21st May 2014, under the supervision

of Dr. Malabika Datta, Principal Scientist and Dr. Vipin C Kalia, Chief Scientist

,at CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi

University Campus, Mall Road, Delhi-110007, and no part of it has been submitted

for any degree or diploma of any institution previously.

Dated 26th May 2014

Place: Tezpur

Mgaw<sup>Z</sup> Mayank Gaur

CSM11013(MCA 6<sup>th</sup> sem.)

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