



**TEZPUR UNIVERSITY**

(A central university established by an act of parliament in 1994)

School of Science and Technology

**Department of Molecular Biology and Biotechnology**

Napaam, tezpur-784028

Assam, India

**Dr. Shashi Baruah**

**Head of the department**

**Tel:+91- 371267007**

**E-mailsbaruah(AT)tezu.ernet.in**

---

**CERTIFICATE OF THE HOD OF THE DEPARTMENT**

This is to certify that Miss Manjeshree Shail student of the Department of Molecular Biology and Biotechnology, Tezpur university, Assam has successfully completed the project entitled “**Immobilization of lipase enzyme onto polymeric associated silver- iron oxide nanoparticle**” as a requirement for partial fulfilment her master of Master of Science in Molecular Biology and Biotechnology degree, under the supervision of Dr. Tapas Medhi, Asst. professor, Department of Molecular Biology and Biotechnology, Tezpur University.

**Date:** 22/05/11

**Place:**

  
**(Dr. Shashi Baruah)**

**Head of the Department**



**TEZPUR UNIVERSITY**

(A central university established by an act of parliament in 1994)

School of Science and Technology

Department of Molecular Biology and Biotechnology

NAPAAM, TEZPUR-784028

ASSAM. INDIA

Dr. Tapas Medhi, PhD  
Assistant Professor

Tel. +91-3712-2670078/Ext.54120(0)  
Fax; +91-3712-267005/267006(0)  
E-mail: tmedhi@tezu.ernet.in

---

**CERTIFICATE BY THE SUPERVISOR**

This is to certify that, Miss Manjeshree Shail, a student of M.Sc. fourth semester of the Department of Molecular Biology and Biotechnology has worked out the project entitled “**Immobilization of lipase enzyme onto polymer assisted silver-iron oxide nanoparticle**” under my supervision and guidance. To the best of my knowledge the result embodied in this project have not been submitted to any other university or institute for the award of any degree or diploma.

**Place: Tezpur university**

**Date: 27/05/11**

**( Dr. Tapas Medhi)**

**Assistance Professor**

## **DECLARATION**

*This is to declare that I have carried out M.Sc Project entitled "Immobilisation of Lipase Enzyme onto Polymer Assisted Silver Iron Oxide nanoparticle" under the supervision of Dr.Tapas Medhi in the Department of Molecular Biology and Biotechnology ,Tezpur University for the partial fulfilment of the degree in Master of Science in Molecular Biology and Biotechnology. The project report embodied here accounts for my own findings and has not been submitted previously for any degree whatsoever by either me or anyone else.*

**Place:** Tezpur

**Date:** 26-05-11

*Manjeshree*

**Manjeshree shail**

**MBM09016**

## **DEDICATION**

*This project report is dedicated to my parents & my sister for their constant morale support and boosting my career with a positive thrust. Without their support, wisdom, patience and guidance, I would not have the goals. I have to strive and be the best to reach my dreams!*

## ACKNOWLEDGEMENT

At the very outset of writing this dissertation I would like to owe my gratitude to the Vice-Chancellor of the Tezpur University, Prof. Mihir Kanti Choudhury for providing necessary facilities in the University campus for successful completion of my project work.

I express my gratitude to Professor Bolin Kr. Konwar, Dean, school of Science and Technology, Tezpur University for his generosity. I would like to acknowledge Dr. S. Baruah , Head of the Dept Of Molecular Biology and Biotechnology for allowing me to carry out my project work in this Department and for his kind support.

I am deeply indebted to Asst. Professor and my supervisor Dr. Tapas Medhi, Dept. of Molecular Biology and Biotechnology, who relentlessly guided me throughout my project work. His inspiring words and continuous assistance made my work quit easier. also his thought provoking advices and moral support gave me strength to complete my work successfully.

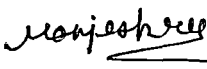
I am extremely thankful to Dr. Manabendra Mandal, Asst. Professor, Dept. of Molecular Biology and Biotechnology for his kind support throughout my project work. I am also thankful to other faculty member of Dept. of Molecular biology and Biotechnology for their kind assistance.

I will be failing my duty if I did not thank Mr Rocktotpal Konwarh, research scholar, Dept of Chemical Sciences for his kind support and helping me in the synthesis and other analysis part.

And I would also like to thank staff members of Dept of Molecular Biology and Biotechnology for being supportive.

Special thank also to my dear class-mates for their kind cooperation. Lastly I dedicate this work to my beloved family.

Date: 26/05/11

  
(Manjeshree shail)