

Dr. Modhuleena Mandal**Current Address:** B-67, New Teachers Flat, Banaras Hindu University, Varanasi-221005, India.**Permanent Address:** D/O. Jhalak Kumar Mandal, 86A, Purbachal Main Road, Kolkata - 700078, India.**Mobile:** 9681591367**Email:** modhuleena.mandal@gmail.com

Objective: Intend to build an academic and research career in an institute of repute with hi-tech environment, committed and dedicated people to explore knowledgebase.

SL. No.	Degree	Year	Subject	University / Institution	C.G.P.A. / % of Marks
1.	10 th	2004	General subjects	ST John's Diocesan Girls H.S. School (WBSE)	69.5% 1 st Div.
2.	12 th	2006	Pure Science	ST John's Diocesan Girls H.S. School (WBCHSE)	60.50% 1 st Div.
3.	B.Sc. (Honours)	2009	Microbiology (Honours)	Sammilani Mahavidyalaya (under University of Calcutta) West Bengal, India	64.50% 1 st class
4.	M.Sc.	2011	Microbiology	Ballygaunge Science College, University of Calcutta, W.B.	68.8% 1 st class
5.	Ph.D.	2018 (Thesis Submitted on 21/12/2017)	Area: Industrial Microbiology, Microbial Fermentation Technology, Enzyme Technology, Solid Waste Management	Dept. of Food Technology and Biochemical Engineering, Jadavpur University, India	SGPA: 8.50 (10 Pt. Scale) (Course Work)

Title of thesis- *Studies on Production of Cellulases by Solid State Fermentation, Its Characterization and Application in Fruit Processing*

EXAMINATIONS QUALIFIED

Sl. No.	Name of Examination	Conducting Agency	Subject	Year
1.	G.A.T.E.	I.I.T.	XL-Life Sciences	2011
2.	Joint CSIR UGC Test for Eligibility for LS (NET)	C.S.I.R.-U.G.C.	Life Sciences	2012
3.	College Service Commission (Empanelled for the post of Assistant Professor)	WBCSC	Microbiology	2015

WORK EXPERIENCE

- Working as **SME** (Subject Matter Expert-Biology) in **Chegg India** (October 2019-present) and **MNE** at Chegg India Since April 2020.
- Freelance academic writing
- Subject Matter Expert (**SME-Healthcare and Sciences**) at **Grey nodes** (From July 2020)
- Article writing expert- Biology** at Digituala from 10th Aug 2022.
- Subject Matter Expert-Biology** at QSolPro for Bartleby from Sept 20, 2022

POST-DOCTORAL EXPERIENCE

Worked as **SRF** in **SERB project** entitled “RNomic and proteomic changes following administration of Ayurvedic Rasayana in wild type and neurodegenerative *Drosophila* models” under the supervision of **Dr. S.C. Lakhota, B.H.U.** (July 2018-May 2019)

TEACHING EXPERIENCE

Sl. No.	Positions held	Name of the Institute	From	To	Pay Scale
1.	Guest Lecturer Department of Microbiology and Molecular Biology	Sammilani Mahavidyalaya (University of Calcutta)	September 2011	February 2013	Rs. 125/class
2.	Guest Lecturer Department of Microbiology	Dinabandhu Andrew's College (University of Calcutta)	September 2012	February 2013	Rs. 250/class
3.	Visiting Faculty	Sri Ramakrishna Institute of Engineering (GATE)	July 2011	February 2013	Rs. 1500/class
4.	Faculty	Chem select, Varanasi (IIT-JAM)	3rd Nov 2019	16 th nov 2019	500 per class
5.	Faculty	Vitagen Biotech(CSIR-NET)	4 th Nov	December 2019	500/class

RESEARCH INTEREST

- Isolation of microorganisms and screening of the organisms for their enzyme producing capacity.
- Statistical optimization of process parameters.
- Purification of protein of industrial importance by chromatographic methods and electrophoresis.
- Study on immobilization of industrially important enzyme.
- Characterization of purified and immobilized enzyme.
- Bioethanol production from cheap raw materials.
- Bioremediation.

SKILLS

- Spectrophotometry
- Light microscope
- Isolation and screening of microorganisms from environmental sources.
- Production, optimization and purification of enzyme of industrial importance
- Second generation biofuel/bioethanol production from fruit waste
- Differential interference contrast microscope
- DNA isolation
- Gel electrophoresis
- SDS-PAGE
- Column chromatography
- Immunostaining
- PCR
- Bioinformatics (BLAST, Primer design, Insilico PCR)
- Software (Design expert, Origin, Excel)

LIST OF PUBLICATIONS

• Journal Publications

[1] S.Das, S. Rai and M. Mandal (2022) M-polynomial and Correlated Topological Indices of Antiviral Drug Molnupiravir Used as a Therapy for COVID-19, Polycyclic Aromatic Compounds, DOI: 10.1080/10406638.2022.2131854. [SCI-EXPANDED, IF=2.19].

[2] Mandal M, Ghosh U.(2019) Immobilization of fungal cellulase on chitosan beads and its optimization implementing response surface methodology. IJCT, 26: 536-543 [SCI-EXPANDED, IF=0.475]. ISSN : 0975- 0991 (Online); 0971-457X (Print).

[3] Mandal M, Ghosh U. (2018) Application of Statistical Tool for Optimization of Physical Parameters for Cellulase Production Under Solid State Fermentation, Indian journal of biotechnology, IJBT, NISCAIR.Vol-17 :441-447. [SCI-EXPANDED, IF=0.324] ISSN: 0975-0967 (Online); 0972-5849 (Print).

[4] Mandal M, Ghosh U. (2017).Optimization of SSF parameters by OFAT for biosynthesis of cellulase using isolated *Aspergillus niger*, in Indian journal of chemical technology, 24: 623-629.[SCI-EXPANDED, SCOPUS, IF=0.475] ISSN : 0975-0991 (Online); 0971-457X (Print).

[5] Mandal M, Ghosh U. (2016). Statistical optimization of cellulase biosynthesis by isolated cellulolytic fungi utilizing horticultural waste. Acta Biologica Szegediensis, 60(1): 39-48. [SCOPUS, SCImago-H INDEX-25] ISSN 1588-4082 (Online).

[6] Mandal M, Ghosh U. (2016).Statistical Optimization of Fermentation Parameters for Production of Cellulase Utilizing Banana Peel. Journal of Advances in Biology and Biotechnology, 7(3):1-9. ISSN: 2394- 1081.

[7] Mandal M, Ghosh U. (2015). Production of Multi-enzyme System by Isolated *Aspergillus* sp Under Solid State Fermentation and Submerged Fermentation. IJLTET, 5(1):186-192. [GLOBAL IF=0.685] e-ISSN: 2278- 621X.

• Book chapter

[8] Mandal M, Ghosh U (2018). Value Addition to Horticultural Solid Waste by Applying It in Biosynthesis of Industrially Important Enzyme: Cellulase. In: Ghosh S. (eds) Utilization and Management of Bioresources pp 279-289. Springer, Singapore (Print ISBN 978-981-10-5348-1, e ISBN-978-981-10-5348-8).

CONFERENCES/SEMIANRS/WORKSHOPS

• Paper Presented

[1] Mandal M and Ghosh U (2014). **Oral presentation** on- Production of multi enzyme system by utilizing solid waste as substrate by solid state fermentation. **National seminar** on environmental pollution and protection. NIT-Durgapur, Oral presentation

[2] Mandal M and Ghosh U (2014). **Oral presentation** on- Production and optimization of cellulolytic enzymes from isolated fungal species by submerged fermentation (SmF). **International seminar**, IMS, role of fungi and microbe in the 21st century – a global scenario.

[3] Mandal M and Ghosh U (2015). Poster presentation on- Production and optimization of fermentation parameters of cellulases by isolated *Aspergillus* sp under submerged fermentation. **National seminar** on recent advances in biotech.

[4] Mandal M and Ghosh U (2016). **Oral presentation** on - Value addition to horticultural solid waste by applying it in biosynthesis of industrially important enzyme, cellulase International conference on solid waste management, ICON SWM.

[5] Mandal M and Ghosh U (2019) **Oral presentation** on-Purification of fungal FPase and its application as bacteriostatic agent, 4th regional science and technology congress.

[6] Mandal and Ghosh (2021), Presented e-poster entitled 'Fungal cellulase and its application in production of 2G ethanol' in 2nd international webinar series on the occasion of **national nutrition month** organized by Dept. of Home science, CU(from 01.09.2021 to 07.09.2021)

[7] Mandal and Ghosh (2023), **Oral presentation** on Optimization of Parameters for Immobilization of Fungal Cellulase on Chitosan Beads, Implementing OFAT Methodology, at 5th regional science and technology congress 2022-2023.

• Participated

[8] Participated in **International seminar** on 3S- safety, security and sustainability: innovations in food and bioprocess

industries, 2015.

[9] Participation in **seminar** on innovation and human resources in development of food and biochemical industries organized by FTBE Department, JU. 2016.

[10] Participation in seminar on changing scenario in food and biochemical engineering organized by FTBE Department, JU. 2016.

[11] Participated in **workshop** on “Industrial experiments for engineering students-WIEEST-2015/1 conducted by Indian Statistical Institute, on Feb 17-19, 2016.

[12] Attended a **Webinar** on “The Untold Toll: Treatment and Post-treatment Impact of COVID-19 on patients and Society” held on 8th May 2020 organized by Adamas University, Kolkata.

[13] Attended a **Webinar** on “Biodiversity and Environmental Protection during Pandemic Outbreak of COVID-19 held on 5th June 2020 organized by Jadavpur University.

[14] Participated in ‘A Three day **National Webinar** on Covid -19 & Indian Economy’ organized by School of Social Sciences, Central University of Gujarat, in collaboration with Students for Holistic Development of Humanity (SHoDH) & Knowledge Partner ICSSR (9.06.2020 to 11.06.2020).

[15] Participated in the **International webinar** on “Food and Nutrition Vs COVID-19” organized by Department of Food and Nutrition, University of Kalyani on 24th July 2020.

[16] Participated in the one day **International webinar** on “Science, Biology and Worlds Future” organized by Dept. of Botany, in collaboration with IQAC, Dinabandhu Andrews College on 25th Aug, 2020. (Honorable speaker-**Prof. Bruce Alberts**).

[17] Participated in 2 day **International Conference on Emerging Trends in Vedic Mathematics & Application in Science, Technology and Social Sciences Research** held on Aug 16-17, 2020.

[18] Participated in online training programme on “Functional fermented dairy foods for management of health and diseases” organized by (DST/SEED/WS/58) ,Feb 2022

[19] Participated in one day workshop on “Planning and writing grant proposal” on Feb 2022.

INVITED AS RESOURCE PERSON

[1] **Mandal M** and Ghosh U (2016). Oral presentation on- Value addition to horticultural waste by applying it in biosynthesis of cellulase: A new avenue in solid waste management. [Invited as resource person in departmental seminar (Microbiology) on ‘Different aspects of microbiology’, at Sammilani Mahavidyalaya].

AWARD AND FELLOWSHIP

- **Outstanding Paper Award** in 4th regional science and technology congress 2019.
- **Excellent paper** award in International conference on solid waste management, ICOM SWM, 2016.
- **UGC-Rajiv Gandhi National Fellowship** (JRF AND SRF)-Batch of 2012-2013.

TRAINING AND PARTICIPATION IN QUIZ

- Industrial project entitled “Visit to **Vivekananda Institute of Biotechnology, Nimpith**”.
- Project entitled “Visit to Pathological unit at **Sri Aurobindo Seva Kendra (EEDF), Kolkata**, on different diagnostic techniques”.
- **M.Sc. summer project**: Entitled “Deactivation of *edd* gene in *Vibrio cholerae* by Insertion Mutagenesis” at **National Institute of Cholera and Enteric Diseases (NICED), Kolkata**.
- **Completed course on the topic of Coronavirus Disease 2019** offered by **AACC Learning Lab for Laboratory Medicine on NEJM Knowledge + (20 March 2020)**
- **Participated in online quiz on COVID-19** organized by **Microbiological Society of India** on 26/8.2020 and passed with 60%.

PERSONAL INFORMATION

Name	: Dr. Modhuleena Mandal
Father's Name	: Er. Jhalak Kumar Mandal
Husband's Name	: Dr. Shibsankar Das
Date of Birth	: 5th August, 1988
Marital Status	: Married
Nationality	: Indian
Language Proficiency	: English, Bengali, Hindi

FAMILY BACKGROUD

My father is a Retired State Govt. Employee (Electrical Engineer, P.W.D., W.B.), my sister is a software engineer and works in Wipro for more than 10 years. My mother is a home maker.

REFEREES

1. **Dr. Uma Ghosh**, Professor, Department of Food Technology and Biochemical Engineering, Jadavpur University, West Bengal, India.
Email: ughoshftbe@yahoo.co.in, Mobile: +91-9830917138
2. **Dr. Susmita Mondal**, Assistant Professor, Department of Life Sciences (DLS), Presidency University, 86/1 College Street, Kolkata - 700073, West Bengal, India
Email: susmita.dbs@presiuniv.ac.in, Mobile: +91-8420284185
3. **Dr. Alok Kumar Sil**, Professor, Department of Microbiology, University of Calcutta, 35, Ballygunge Circular Road, Calcutta-700019, India.
E-mail: alokksil7@gmail.com, Mobile: +91-9831836050
4. **Dr. Sharmila Chakraborty**, Associate Professor, Department of Microbiology, Sammilani Mahavidyalaya, Baghajatin, E.M. Bypass, Santoshpur, Kolkata 700094, West Bengal, India.
E-mail: sharmilachak@yahoo.co.in, Mobile: +91-9433281924
5. **Dr. Debajyoti Bose**
Professor and Head, Department of Biological Sciences, Yobe State University, Nigeria.
Email: debajyotibose@gmail.com, Mobile: +91-7044715212

Declaration: I hereby declare that the information furnished above is true to the best of my knowledge and belief.

Date: JANUARY, 23

Dr. Modhuleena Mandal