Dr. Sudeshna Shyam Choudhury (bhattacharya)

Father's Name: Late Sri Samar Nath Bhattacharya

Designation: Assistant Professor

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Date Of Birth: 30.5.1976

Educational Qualifications:

- **Madhyamik Examination:** 78.55% , 1st division with star marks under W.B.S.E
- **Higher Secondary Examination**: 73.4%, 1st division under W.B.C.S.E
- **B.Sc.**: 55.25%, in Chemistry Hons. under Calcutta University
- **M.Sc:** 72.3% in Bio-chemistry under Calcutta University (**1st class 2nd rank**)
- **Ph.D**: Awarded from Jadavpur University under Prof. Swati Sen-Mandi (Ph.D Cantab)-Senior Prof of **Bose Institute, Plant Biology division** ---**Title of thesis**: Cell Molecular Studies on Spontaneous Radiation Namely UV Stress Tolerance in Plants.

Professional Qualifications:

- Passed GATE examination (IIT) in 2000-**93.96** percentile
- Passed NET examination for UGC lectureship conducted by CSIR-UGC.
- Attended the Calcutta University Academic Staff College organized one month orientation program.

Research Training:

- Attended a (15 days) workshop about techniques of Biotechnolgy in TATA ENERGY RESOURSE INSTITUTE (TERI), dimmed University, New Delhi Related to **DNA FINGERPRINTING FOR CATALOGUING OF 2000 INDIAN TEA CLONES UNDER THE NETWORK PROJECT OF DBT as member of BOSE INSTITUTE**
- Attended workshop on BIOINFORMATICS from Indian Toxicological Research Institute, Lucknow.

➢ ***Selected peer-reviewed research publications***

List of Publications

1. Sen-Mandi, S. and **Bhattacharya, S.** (**2003**): Varietal difference in cellular damage associated with ageing in dry stored seeds. ***Indian Journal of Plant Physiology*****,** 210-216.
2. **Bhattacharya, S.** and Sen-Mandi, S. (**2011**): Variation in antioxidant and aroma compounds at different altitude: A study on tea (*Camellia sinensis* L. Kuntze) clones of Darjeeling and Assam, India. ***African Journal of Biochemistry Research,*** 5(5): 148-159.
3. **Shyam Choudhury, S.** and Sen Mandi, S. (**2012**): Natural ultraviolet irradiance related variation in antioxidant and aroma compounds in tea (*Camellia sinensis* L. Kuntze) plants grown in two different altitudes. ***International Journal of Environmental Biology***, 2 (1): 1-6
4. **Shyam Choudhury, S**. and Sen Mandi, S. (**2012**): Natural ultraviolet radiation on field grown rice (*Oryza sativa* L.) plants confer protection against oxidative stress in seed during storage under subtropical ambience. ***Environment and Pollution***, 1(2): 21-32.
5. **Shyam Choudhury S**., Sikder P., Chatterjee S., Chatterjee A., Mukherjee, Roychowdhury M., Misra D., Das S. and Paul I. (**2013**): Dissemination of potential fungal pathogen from *Eupatorium sp* (a weed plant) in a composite farming backdrop. ***International Journal of Advanced and Innovative Research,*** 1(7) : 408-432.
6. Saha, S., Mitra, A.K., **Shyam Choudhury, S**., Mitra, B. (**2013**): Chromium Uptake by a Bacteria Isolated From Lemna Rhizosphere in a Lentic Ecosystem. Vol-II, Issue-I; 67-73.***International Multidisciplinary e – Journal***.
7. Sengupta D., Mitra A.K., **Shyam Choudhury, S**. (**2013**) Identification and characterization of the effectively Arsenic tolerant bacterial strains from the potential Arsenic contaminated site in 24 Parganas (North) district of West Bengal, India. Vol 12. Issue 2, ***Nature, Environment and Pollution technology***
8. Mal, A., Sengupta D., Ghosh,M., Dasgupta, P., Dey, P., **Shyam Choudhury, S.,** Mitra, A. (**2013**) Protective algal consortium in the sporocarp of wood rotting fungus from bacterial chitinase activity. ***J. Mycopathol, Res***, 51(1): 145-149, 2013;ISSN 0971-3719
9. Sengupta D., Mitra A.K., **Shyam Choudhury S**. and Chandra A. (**2014**) Isotherm Study in Arsenic Tolerant Bacteria Isolated from Arsenic Affected Area in West-Bengal, India. ***IOSR Journal Of Environmental Science, Toxicology And Food Technology*** (IOSR-JESTFT)Volume 8, Issue 1 Ver. II (Jan. 2014), PP 08-19.
10. **Choudhury S.S** and Mitra A.K. (**2014**): Oxidative stress and its protection in rice (*Oryza sativa*) seed during storage: ***International Journal of Biology, Pharmacy and Allied Scineces*** May, 2014, 3(5): 740-760.
11. Som Chaudhury S., Sen T., Moitra A., Chaudhuri S., **Shyam Choudhury S.** and Mitra, A.K.(**2014**) Induction of productivity in *cicer arientinum* by phosphate solubilizing *pseudomonas.* **World journal of pharmacy and pharmaceutical sciences.** Volume 3, Issue 4, 1481-1493.
12. Mustafi P., Siddhanta R., **Choudhury S. S.** (**2014**) Altitude Related Variation of Antioxidant Properties of Tea Leaf (Camellia sinensis). ***Research & Reviews: Journal of Microbiology and Virology.*** ISSN: 2230-9853 (online), ISSN: 2349-4360 (print). Volume 4, Issue 2. Pg-1-6.
13. S.Datta**, S.ShyamChoudhuri** and A.K.Mitra (**2014**) Increased Biomedical Potential of *Pleurotusostreatus*through the usage of Effective Substrate. ***Int J Pharm Bio Sci***. 5(4): (B) 882 – 894.(IF.2.958).
14. Adrika Raybarman, Kazi Atikur Rahman, Russel Miranda Vincent, Sayantani Chatterjee, Upasana Sen, Arup Kumar Mitra, **Sudeshna Shyam Choudhury**, Riddhi Majumder (**2014**) Isolation and characterisation of lignin-degrading fungus from coir. ***IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT).***Volume 8, Issue 10 Ver. II PP 07-11(I.F.1.325).
15. Prateeka Borar, Kushan Chowdhury, Neeraja Marathe, Parijat Das, Sowptika Pal, Arup Kumar Mitra, **Sudeshna Shyam Choudhury**. (**2015**) Isolation and characterization of *Aeromonas aquariorum* from a dye effluent and its effect in bioaugmentation. ***IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT).***Volume 9, Issue 2 Ver. III , PP 10-16. (I.F.1.325).

16. Vincent Souvik Gomes, Priyanka Barui, **Sudeshna Shyam Choudhury**. Biochemical, Antimicrobial Characterization of Dooars Tea *(Camellia sinensis)* Clone during CTC Manufacturing. ***Research & Reviews: Journal of Microbiology and Virology.*** **2015; 5(2):** 5–14p.
17. Shyam Choudhury, S., Majumder, A., Bera, B.and Singh, M. (**2015**). Antimicrobial, Antioxidant Evaluation of Majestic Darjeeling Green and Black Tea during Storage. **Research & Reviews: A Journal of Microbiology and Virology ISSN: 2230-9853(online), ISSN: 2349-4360(print) Volume 5, Issue 3**

Resource Person:

(i) In Skill set training in Science and technology, 2007, 2008, 2009, 2012 - funded by D.B.T, Govt. Of India
(ii) In UGC sponsored lecture series (for 3 years)organized by EMMRC, Kolkata.
(iii) In Bose Institute workshop on hands-on-training regarding medicinal plants and DNA fingerprinting-funded by ICMR, for the years 2014, 2015.
(iv) Resource person in UGC EMMRC sponsored documentary films “Darjeeling Tea: Tea of High Value” and “Aroma Of Darjeeling Tea”

Research Experience:

i. Worked mainly on Marker Assisted Selection (MAS) of two economically important crops (Rice and Tea).
ii. Plant Biochemistry and Biotechnology related to stress specially natural Ultraviolet stress on different altitude grown tea clones.
iii. Measurement of natural UV radiation in different altitude
iv. Altitude related variation of aroma and antioxidant compounds of Darjeeling and Assam tea clones.
v. Effect of natural UV radiation in rice and tea.
v. Quality related biochemical analysis (HPLC, TLC, spectrophotometric and spectrofluorimetric analysis, Electron paramagnetic resonance (EPR) study of economically important plants (rice—storability/antioxidant, tea—aroma/antioxidant).

- Genetic cataloguing of 2000 tea clones by DNA Fingerprinting method using RAPD, RFLP, ISSR, AFLP techniques.
- Quantitative Trait Loci (QTL) analysis of crop plants.
- Physiological and biochemical marker enzyme detection (including polyphenol oxidase, alcohol dehydrogenase, superoxide dismutase, ascorbate peroxidase, catalase, glutathione reductase etc.).
- Microbial characterization by Biochemical, Morphological and Molecular Biological analysis
- Data interpretation via Bioinformatical programming as FASTA, BLAST, NTSYS
- Knowledge of Cloning, sequencing.
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Book publication:

1. Book entitled “Environmental Science”—By Dr.Arup Kumar Mitra, **Sudeshna Bhattacharya (Shyam Choudhury)**, Dipanjali Saha.

2. Contributed a chapter on Molecular Biology in a Himalayan Publishing House book on " Practical Manual of Modern Microbiology". Edited by Dr. Arup Kumar Mitra and Dr. Kasturi Sarkar.

Chapters contributed:

1. Effect of UV radiation on two economically important plants: rice and tea—**Sudeshna Bhattacharya (Shyam Choudhury)**: Environmental Pollution on Biosphere and its Management (vol I), Edited by D. Mitra and A.K.Mitra; The ICFAI University Press. Page 85-101

2. Comparison of efficacies of different water treatment methods—Basu H., Dey I, Ahmed S., Mahapatra, R., Alam, B. and **Bhattacharya, S.** and Mitra, A.K.M. Environmental Pollution on Biosphere and its Management (vol II), Edited by D. Mitra and A.K.Mitra; The ICFAI University Press. Page 115-124.

Project Awarded:

Awarded a project from National Tea Research Foundation, Tea Board Govt. Of India named "Studies on keeping quality of different types of tea (Black, Green, Oolong & White) and their bio chemical aspects & antioxidant properties".