BIO DATA

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Date of Birth: 30.5.1976
Sex: (M/F): F
Category (Gen/SC/ST/OBC):Gen

❖ **Academics:**

Sl No.	Institution Place	Degree awarded	Year	Field of study
1	**W.B.S.E**	**Madhyamik Examination-** 78.55% , 1st division-with star marks	**1992**	Science and Arts
2	**W.B.C.S.E**	**Higher Secondary Examination-** 73.4%, 1st division	**1994**	Science (Physics, Chemistry, Mathematics, Biology)
3.	**Calcutta University**	**B.Sc.** (Chemistry Hons.)- 55.25%	**1998**	Chemistry (H) Physics (P), Maths (P)
4.	**Calcutta University**	**M.Sc** (Biochemistry)- 72.3%-1st Class 2nd Rank	**2000**	Biochemistry (special paper- Toxicology and nutrition)
5.	**Jadavpur University**	**Ph.D** (Plant Molecular Biology and Biochemistry)	**2012**	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.

❖ **Position and Employment**

Assistant Professor at St. Xavier's College Kolkata from 16.7.2007 till date

❖ **Honors and Awards, Books, Patents Received**

Book publication:

✓ Book entitled "Environmental Science"—By Dr.Arup Kumar Mitra, Sudeshna Bhattacharya (Shyam Choudhury), Dipanjali Saha.

- ✓ Book entitled "Fundamentals of Biochemistry" by Dr. Sudeshna Shyam Choudhury—Book syndicate 2018

Chapters contributed:

- 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
- 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-
- ***C***ontributed 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**.**

Patent

Development of DetecTEA, a low cost easy to use instrument for Quick Validation of Geographical Indication, Darjeeling Tea. Indian Pat. Appl. (2017), 201721014138 dated 20th April 2017.

Award and fellowship:

Institutional fellowship of Bose Institute from 2000-2005

- ❖ **Project awarded:**

1. Awarded a project (as PI) from National Tea Research Foundation, Tea Board Govt. Of India , 2016- named "Studies on keeping quality of different types of tea (Black, Green, Oolong & White) and their biochemical aspects & antioxidant properties".
2. Awarded a UGC Minor project (as PI) entitled" Biochemical, biomedical, molecular evaluation of Darjeeling tea (*Camellia sinensis* L. (O) Kuntze.) clones under natural UV radiation stress".2017-2019
3. Awarded a NTRF project (as Co-PI) entitled" Development of a Low Cost, Easy to Use Instrument for Quick Validation of Geographical Indication, Darjeeling Tea" 2017

- ❖ **RESEARCH EXPERIENCE:**

Worked mainly on Marker Assisted Selection (MAS) of two economically important crops (Rice and Tea).
Plant Biochemistry and Biotechnology related to stress specially natural Ultraviolet stress on different altitude grown tea clones.
Measurement of natural UV radiation in different altitude
Altitude related variation of aroma and antioxidant compounds of Darjeeling and Assam tea clones.
Effect of natural UV radiation in rice and tea.
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

- ❖ **FIELD OF RESEARCH:**

- ✓ Phytochemical analysis under abiotic stress specially UV radiation
- ✓ Altitude related variation in plant metabolites (specially tea)
- ✓ E-sensor based analysis of medicinal and other beverages specially tea
- ✓ Biochemical and biophysical analysis of industrially important plant enzymes

- **RESOURCE PERSON:**

- ✓ In Skill set training in Science and technology, 2007, 2008, 2009, 2012—funded by D.B.T, Govt. Of India
- ✓ In UGC sponsored lecture series (for 3 years)organized by EMMRC, Kolkata.
- ✓ In Bose Institute workshop on hands-on-training regarding medicinal plants and DNA fingerprinting-funded by ICMR, for the years 2014, 2015.
- ✓ Resource person in UGC EMMRC sponsored documentary films "Darjeeling Tea: Tea of High Value" and "Aroma Of Darjeeling Tea",2015
- ✓ Resource person for Ph.D course work in West Bengal State University, June, 2016.
- ✓ Empanelled as a Ph.D supervisor in St. Xavier's college Microbiology Department-selected by Ph.D committee, 2016.
- ✓ Resource person for Ph.D course work in St.Xavier's college 2017
- ✓ Resource person in Swayam for MOOC

- **Selected peer-reviewed publications**

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Pritam Biswas, Aniruddha Adhikari, Uttam Pal, Priya Singh, Monojit Das, Tanusri Saha-Dasgupta, **Sudeshna Shyam Choudhury**, Ranjan Das, Samir Kumar Pal	Dynamical Flexibility Modulates Catalytic Activity of a Themostable Enzyme: Key Information from Optical Spectroscopy and Molecular Dynamics Simulation.	SOFT MATTER	16	3050-3062	2020
2.	**Sudeshna Shyam Choudhury**, Rumjhum Mukherjee, Rajanya Ghosh, Modhura Mondal, Sohini Majumdar	The positive effect of UV radiation on biochemical and microbiological characteristics of different altitude grown Darjeeling tea clones.	**International Journal of Food Science and Nutrition** ISSN: 2455-4898	Volume 3; Issue 2	28-31	2018
3.	Gargi Saha, **Sudeshna Shyam Choudhury**, Biswajit Bera, P.Mohan Kumar	Biochemical and Microbiological Characterization of White Tea..	IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT) e-ISSN: 2319-2402,p- ISSN: 2319-2399	Vol 11; issue 5	74-80	2017
4.	Saha, G. and **Shyam Choudhury, S**.	Physicochemical, Biochemical and Microbiological Characterization of	Research & Reviews: A Journal of Microbiology and Virology ISSN: 2230-9853(online),	Volume 6, Issue 3	165-177	2016

		Green and Black Tea during Storage in Different Packaging Materials	ISSN: 2349-4360(print).			
5.	**Shyam Choudhury, S.,** Majumder, A., Bera, B.and Singh, M.	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..	24-34	2015
6.	Mustafi P., Siddhanta R., **Choudhury S. S.**	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.	1-6	2014
8.	**Shyam Choudhury, S**. and Sen Mandi, S.	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	2012b
9.	**Shyam Choudhury, S.** and Sen Mandi, S.	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	2012a
10.	**Bhattacharya, S.** and Sen-Mandi, S	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	2011

11.	Sen-Mandi, S. and **Bhattacharya, S.**	Varietal difference in cellular damage associated with ageing in dry stored seeds.	Indian Journal of Plant Physiology	Spl vol.	210-216	2003