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5	Date of Joining	13/04/2015			
Academic qualifications					
6	Degree	Subject	University	Year	
	Ph.D	ZOOLOGY	THE UNIVERSITY OF BURDWAN	2021	
	MA/M.sc	ZOOLOGY	UNIVERSITY OF CALCUTTA	2011	
	BA/B.Sc	ZOOLOGY	UNIVERSITY OF CALCUTTA	2009	
PH.D. DETAILS					
7	Title of the Thesis	***"A Study on the Physicochemical Parameters and the prokaryotic community of benthic soil of Aquaculture farms in East Kolkata Wetlands for determination of ecological health status"***			
	Field of specialization under subject/ discipline	GENETICS AND MOLECULAR BIOLOGY, ECOLOGY AND BIODIVERSITY, BIOCHEMISTRY, TAXONOMY, MICROBIOLOGY, EVOLUTION			
8	PREVIOUS POSITIONS/Engagement	JUNIOR RESEARCH FELLOW, WEST BENGAL BIODIVERSITY BOARD FUNDED PROJECT, PRESIDENCY UNIVERSITY, 2012-2014			
9	Google scholar page:	https://scholar.google.com/citations?user=1xJE5ZoAAAAJ&hl=en			
10	ORCID ID	https://orcid.org/0000-0003-1618-031X			
11	HONOURS AND AWARDS	• Best poster presentation award in "Microbes in our Life" - Organized by Vijaygarh Jyotish Roy College, 7th may, 2019 • Best oral presentation award in " 2nd Regional Science and Technology Congress (Western Region), 2017" - Organized by The University of Burdwan and DHESTBT, Govt. of West Bengal, November 16-17,2017. • Best oral presentation award in "National symposium on modern trends in animal science research and challenges of the day" - Organized by Presidency University, Kolkata, March 23-25, 2011			
12	CURRENT RESEARCH PROJECT/Field of Research	ENVIRONMENTAL MICROBIOLOGY, BIODIVERSITY AND ECOSYSTEM FUNCTIONING			
13	TECHNICAL UNDERSTANDING AND EXPERIENCE	**Technical Skills:** a. Molecular Biology: • Bacterial and Eukaryotic DNA isolation, Metagenomic DNA isolation, Plasmid DNA Isolation, PCR Amplification, Molecular Cloning (pUC -19 and TA Cloning vectors), Restriction digestion of plasmid and chromosomal DNA, DNA and Protein (Native & SDS - PAGE) gel, Western Blot, FACS, etc. b. Microbiology: • Bacterial culture and Media preparation, Bacterial Handling and sterilization, Bacterial culture purification and isolation, Bacterial Growth Kinetics, Determination of MIC and MBC, Transformation, Biochemical characterization of bacteria, Gram Staining, Acid Fast Staining, etc.			

		c. In – Vivo: • B6- albino mouse model handling, Intra-peritoneal injection of EAC and S180 Cell lines for development of liquid tumor. d. Histology: • Tissue extraction, fixation, paraffin block preparation, sectioning using microtome, staining using H/E, Gomori's Trichrome and IHC. e. Imaging: • Light microscopy, Phase Contrast microscopy, Fluorescence microscopy. f. Genetics: • Chromosome Preparation from Bone Marrow and Polytene Chromosome, Culturing and Handling of Drosophila, Karyotyping. g. Biochemistry: • Determination of Antioxidative potential of plant extracts by estimating total Flavonoids and Phenolics content, Determination of radical scavenging activity of plant extracts using DPPH and ABTS. Enzymatic characterization of extracellular cellulase and lipase of bacteria, HPTLC. h. Bioinformatics: • Basic DNA/RNA Sequence Processing, Handling of FASTA Format sequences, Primer designing, Construction of Phylogenetic Trees using 16S rDNA sequencing data of Prokaryotes. Competent with software like BLASTn, CLUSTALW, MUSCLE, MEGA X. Processing of metagenomic (Illumina Miseq Next Gen Sequencing) data in Linux platform using QIIME2 with deblur and dada2 plugin, Processing of transcriptomics data using bowtie2t and tophat algorithms. Basic coding to run pipelines in Python and R software. Running pipelines for metagenomics and Transcriptomics in Server based tools. i. Ecology and Biodiversity: • Transects and Point count, Canopy Estimation, Vegetational Diversity analysis (IVI), Insect Trapping, NDVI, QGIS based landscape analysis.
14	SUMMARY OF RESEARCH EXPERIENCE	• **Ph.D. from Department of Zoology, The University of Burdwan (2017-2021)** **Projects undertaken:** ▪ **Analysis of the seasonal variation of Physicochemical Parameters of Water and Benthic Soil of an Aquaculture farm.** ▪ **Isolation, purification, and identification of prokaryotes from the benthic soil sample along with its seasonal variation, molecular, biochemical, and enzymatic characterization.** ▪ **Metagenomic analyses of the benthic soil samples using Illumina Mi-Seq with subsequent in-silico analyses in QIIME2.** ▪ **Determination of the statistical relationship between the seasonal variation of the physicochemical parameters of water and benthic soil with the seasonal variation of the prokaryotic community.** • **Research Scholar, Department of Life Science, Presidency University (2012 – 2014)** **Projects undertaken:** • **Antimicrobial and Antioxidative potential of bryophytes and angiosperms against human pathogens.**

		▪ **Analysis of Total Phenolics and Flavonoids content using a spectrophotometric assay to estimate the antioxidative potential.** ▪ **Determination of MIC and MBC of the crude extracts against four human pathogens.** • **Study of Antimicrobial and Antioxidative potential of plant secondary metabolites.** • **Mentorship Experience (PG Section Department of Zoology, Vidyasagar College) 2015 – till date:** Mentored a total of 37 Students for their Masters of Science Dissertation Projects. Projects Undertaken: • Efficacy of Earthworm *Lampito* sp. as potential bioremediator of heavy metal contaminated soil. (Special Paper: Ecotoxicology) • Effect of heavy metal toxicity on the protozoan parasites inhabiting the seminal vesicle of Earthworm. (Special Paper: Parasitology and Immunology • Cytotoxic effect of heavy metals on earthworm coelomocytes and body tissue. (Special Paper: Molecular Cell Biology) • Scale-dependent drivers affecting the distribution and foraging pattern of avifauna in the peri-urban agricultural fields of Kolkata, India. (Special Paper: Biodiversity and Ecosystem Functioning) • Temporal diversity and light affinity of urban insects (Special Paper: Biodiversity and Ecosystem Functioning) • Spatial variation of avifaunal diversity across the urban gradients of Salt Lake City, Kolkata, India. (Special Paper: Biodiversity and Ecosystem Functioning)
15	EXPERIENCE OF PROJECT MANAGEMENT	WBDST (West Bengal Department of Science and Technology) funded BOOST project in Department of Zoology, Vidyasagar College, Kolkata. Assisted the Coordinator in equipment procurement including call for tenders, comparative quotation preparing and subsequent order placement for the project. Other responsibilities include maintenance and record keeping of the instruments and consumables.
16	COMPLETE LIST OF PUBLICATIONS (Maintain Harvard Format)	1. Hazra, A., Bhattacharyya, K., Dutta, S., Ghosh, H., Sen, D., **De, A.**, Bhttacharjee, N., Pattnaik, S. and Ganguly, S., 2023. Isolation and characterization of a novel l-Methionine producer from Mahanadi River site in Sambalpur district of Odisha, India. Biocatalysis and Agricultural Biotechnology (2023), 49, p.102659. (IF – 4.259) 2. Das M, Basu M, De A (2023), A Study on Diurnal Activity Pattern of Captive Sloth Bear (Melursus ursinus) in Alipore Zoological Garden, Kolkata, India; IJB, V23, N5, November, P10-23 3. Bhattacharyya K, Sen D, Dey BB, **De A**, Bhattacharjee N, Biswas AB, Banik AK, Ganguly S. Isolation and characterization of heavy metals and non-metallic pollutant-tolerant microorganism from wastewater of Tollygunge Canal (Kolkata) West Bengal, India. Biologia (2022). https://doi.org/10.1007/s11756-022-01086-8. (IF – 1.24) 4. **De A**, Mukherjee S, Sadhukhan GC, Ash A, Saha NC. "Analysis of the lipolytic potential of three bacterial strains isolated from benthic soil of an aquaculture farm in East Kolkata Wetlands, India. RJLBPCS, 2021; 7(1). 5. **De A**, Mukherjee S, Sadhukhan GC, Saha NC. Seasonal Variation of Culturable Benthic Soil Prokaryotic Microbiota as Potential Fish Pathogens and Probiotics from an Aquaculture Farm in East Kolkata Wetlands, India. J Pure Appl Microbiol. 2020;14(3):1983-98. (IF – 0.8)

		6. Mukherjee S, **De. A** Sarkar NK, Saha NC. Isolation and Characterization of Benzene Utilizing *Bacillus* spp. from Petroleum Contaminated Soil in Kolkata, West Bengal, India. Asian J. of Microbiol, Biotechnol & Env Sc., 2019, 21(2), 428-437. 7. Mukherjee S, **De A**, Sarkar NK, Saha NC. Aerobic Degradation of Benzene by *Escherichia* spp. from Petroleum-contaminated Sites in Kolkata, West Bengal, India. J Pure Appl Microbiol. 2019;13(4):2353-62. (IF – 0.8) 8. **De A**, Mukherjee S, Sadhukhan GC, Saha NC. An Insight into the Cellulolytic Potential of Three Strains of *Bacillus* Spp. Isolated from Benthic Soil of Aquaculture Farms in East Kolkata Wetlands, India. Journal of Pure and Applied Microbiology. 2018 Sep 1;12(3):1597-605. (IF – 0.8) 9. Dey A, Mukherjee S, **De A**, Pandey DK. A stigmasterol containing n-hexane fraction of *Rauvolfia serpentina* methanolic extract shows tissue-specific variation of biocidal and antioxidant activities. Journal of Herbs, Spices & Medicinal Plants. 2016 Jan 2;22(1):81-91. (IF – 0.9) 10. Dey A, Mukherjee S, **De A**. Altitude and growth stage specific variations in antimicrobial activity of Darjeeling Himalayan *Pellia endiviifolia* against selected human pathogens. Journal of Herbs, Spices & Medicinal Plants. 2015 Jan 2;21(1):102-10. (IF – 0.9) 11. **De A**, Mukherjee S, Dey A. Altitudinal Variation of Anti-Human-Pathogenic-Bacterial Activity and Antioxidative Properties of Darjeeling Himalayan *Marchantia polymorpha* L. Journal of Biologically Active Products from Nature. 2015 Jan 2;5(1):33-42. 12. Dey A, **De A**, Ghosh P, Mukherjee S. Altitude and tissue type influence antioxidant potential of *Pellia endiviifolia* from Darjeeling Himalaya. Journal of Biological Sciences. 2013 Nov 20;13(8):707. 13. Mukherjee S, **De A**, Ghosh P, Dey A. In vitro antibacterial activity of various tissue types of *Dumortiera hirsuta* (Sw) Nees from different altitudes of eastern Himalaya. Asian Pacific Journal of Tropical Disease. 2012 Jan 1;2: S285-90. (IF – 0.5) **Book chapter:** 14. Souryadeep Mukherjee, Abhijit Dey, **Arijit De**, Pinky Ghosh. "Antioxidative potential of two Darjeeling Himalayan *Marchantia* sp.: *M.paleacea* and *M. papillata*." "Utilisation and management of Medicinal Plants - Vol. 2'. (Book series published by M/S Daya Publishing House, New Delhi.)
17	Extracurricular Activities	Wildlife and Nature Photography.
18	Link to personal website (if any)	