

Tanmoy Sarkar

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https://github.com/elvenkingfeanor/my_cv

Brief Profile

An analytical Biotechnology post-grad with 6+ years of STEM research experience and ongoing graduate level teaching experience, a keen attention to detail, a knack to think outside the box, and a dedication to improve workplace competency through utmost dedication and perseverance. Possess a wide variety of skill sets ranging from **stem cell culture** to **data analysis and visualization** to **clinical physiology** and biomedical communications, required in either a laboratory or classroom, in a clinical or industrial setting. Ancillary technical ability of a variety of **programming languages and Linux** tools, means ability for rapid multitasking and efficient time management.

Summary of Skills

Core Skills	<ul style="list-style-type: none">• Cell culture protocols a) <i>Primary stem cell culture</i> – tissue isolation, stem cell enrichment, cryopreservation, FACS, immunostaining, MTT assay, b) <i>Secondary cell culture</i> – subculture, complete media formulation and serum handling, Trypan Blue staining, lysis, c) <i>Bacterial cultures</i> – broth media formulation, agar media plating, quantitation, lysis• Proteomics SDS-PAGE, 2D-PAGE, ELISA, MALDI-TOF, HPLC, Western blotting, spot analysis• Genetic engineering gene cloning, vector engineering, electroporation, qRT-PCR, cDNA, restriction mapping, epigenetic profiling• Microscopy confocal microscopy, live-cell imaging, inverted microscopy, compound microscopy for histological, hematological and microbial studies.• Data visualisation using R statistical programming language for a) <i>Correlation studies</i> – scatter plots, heatmaps, connected scatter plots, b) <i>Ranking studies</i> – bar graphs, circular bar graphs, spider plots, dendrogram plots, c) <i>Proportion studies</i> – pie charts, doughnut charts, grouped and stacked bar graphs• Statistical data analysis t-tests, Mann-Whitney tests, Chi-square tests, ANOVA analyses.• Biomedical communications academic writing including bibliography management using BibTeX, proposal and grant writing, research and reporting, collaboration• Laboratory animal handling <i>Rattus norvegicus</i> (laboratory rat) strains – Wistar, Sprague-Dawley• Clinical physiology sphygmomanometry, phlebotomy, spirometry.• Clinical biochemistry blood sugar, blood uric acid, serum urea estimations.• Bioinformatics strategies BLAST, FASTA3, ClustalW• Biological instrumentation BD FACScalibur, Roche LightCycler 480, Biorad Image Lab, Nanodrop
Technical skills	<ul style="list-style-type: none">• Programming languages a) <i>Typesetting</i> – Groff¹, LaTeX, Markdown, HTML, b) <i>Big data and data-base management</i> – R, SQL, c) <i>Basic scripting and automation</i> – Bash, Lua, Python• Git-based version control systems git, diff, patch• Image editing and quantitation ImageJ, PDQuest, Inkscape, GIMP, imagemagick• Linux sysadmin tools vi, cron, ssh, sed, awk, grep, find, fdisk, systemd, ip, curl, wget, grub• Advanced MS-Office proficiencies pivot table creation, batch operations• Advanced Web-based skills OAuth2 token, XML feed generation, search engine optimization (SEO)
English Skills	Excellent verbal and written communication skills ² , with a decent typing speed of 45WPM.
Key Strengths	A dependable, hard-working and self-motivated employee. Also an excellent and empathetic team player, who can easily instill trust and confidence in colleagues, and is a problem-solver to boot.

Professional Experience

¹ This document was prepared in the vi text editor using groff typesetting language.

² Score of 098/120 in Test of English as a Foreign Language (TOEFL) Internet-Based Test (iBT), from August 2012.

2024 - present	Tezpur University – Napaam, Assam <i>Guest Faculty</i> Elucidated the importance of biology and biochemical reactions to B.Tech students through: <ul style="list-style-type: none"> • conveying the significance of biomolecules and their myriad manifestations • the central role of experiments in the quest for new discoveries, for eg. the identification of DNA as the genetic material involved in the molecular basis of information transfer • the analysis of biological processes at a reductionistic level, and the application of physico-chemical processes like thermodynamics, in biological systems – and evaluate them as per guidelines set by NAAC and UGC.
2014 - 2021	CSIR-Institute for Genomics & Integrative Biology (IGIB) – New Delhi <i>Research Fellow</i> Meticulously worked under the supervision of Dr. Sagarika Biswas to accomplish: <ul style="list-style-type: none"> • setup viable cell culture laboratory and standardized stem cell culture protocols • performed RNA and protein studies on patient samples using cDNA libraries and RT-PCR • used R, Python and Linux tools on proteomics data to produce – a) <i>data visualization</i> like scatter plots for correlation studies, pie charts for proportion studies, dendrogram plots for hierarchical studies, and, b) <i>statistical analysis</i> like t-tests and ANOVA tests. • undertook academic writing involving LaTeX style sheets, including bibliography management using BibTeX, proposal and grant writings, collaborations and reports. • carried out animal handling and dissection in accordance with ethical committee procedures • additionally, arranged seminars, guided trainees, collected samples, and other laboratory related subsidiary works – thesis titled <i>Cytokine-mediated modulation of stem cell behaviour in rheumatoid arthritis</i> .
2011 - 2012	DBT-Centre for DNA Fingerprinting & Diagnostics (CDFD) – Hyderabad <i>Research Fellow</i> Worked under the guidance of Dr. Subhadeep Chatterjee to achieve: <ul style="list-style-type: none"> • plasmid vector engineering and establishment of bacterial cultures • bacterial genetic engineering using electroporation and validation using PCR – thesis titled <i>Probing plant-microbe interactions in Xanthomonas quorum sensing</i> .

Awards & Achievements

2014	CSIR-UGC National Eligibility Test (NET) for JRF & LS – CSIR Rank – <i>CSIR 064</i>
2013	CSIR-UGC National Eligibility Test (NET) for JRF & LS – UGC Rank – <i>UGC 048</i>
2012	Graduate Records Examination (GRE) – ETS Percentile Rank – • <i>Verbal Reasoning</i> – 64 • <i>Quantitative Reasoning</i> – 82
2011	Graduate Aptitude Test in Engineering (GATE) – IIT Madras Rank – <i>515</i>
2010	CSIR-UGC National Eligibility Test (NET) for JRF & LS – CSIR Rank – <i>CSIR 091</i>
2006	DST-Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship – IISc Bangalore National Level Science Talent Search Examination (NSTSE) – Unified Council India, Hyderabad Rank – <i>352</i>

Publications & Posters

2020	Sarkar, A., Sharma, S., Agnihotri, P., Sarkar, T. , Kumari, P., Malhotra, R., Datta, B., Kumar, K., Biswas, S. <i>Synovial fluid cell proteomic analysis identifies upregulation of alpha-taxilin proteins in rheumatoid arthritis: a potential prognostic marker.</i> Journal of Immunology. DOI: 10.1155/2020/4897983
2014	38th All India Cell Biology Conference and International Symposium on Cellular Response to Drugs – CSIR-Central Drug Research Institute (CDRI).

Educational Background

2016	Senior Research Fellow – University Grants Commission <i>CSIR-Institute of Genomics & Integrative Biology, New Delhi</i>
2014	Junior Research Fellow – University Grants Commission <i>CSIR-Institute of Genomics & Integrative Biology, New Delhi</i>
2011	Junior Research Fellow – Council for Scientific & Industrial Research <i>DBT-Centre for DNA Fingerprinting & Diagnostics, Hyderabad</i>
2011	Master of Science – Utkal University, Bhubaneswar <i>PG Department of Biotechnology, Utkal University, Bhubaneswar</i>
2009	Bachelor of Science with Honours – University of Calcutta <i>erstwhile Presidency College, now Presidency University, Kolkata</i>

References

Dr. Sagarika Biswas	Scientist 'F', CSIR-IGIB, Proteomics lab, Room 311, North Campus, Mall Road, near Jubilee Hall, Delhi University campus, Delhi – 110007. Email: sagarika.biswas@igib.res.in Phone: +91-1127662581
Dr. Dakshayani Mahapatra	Assistant Professor (WBES), Dept. of Physiology, Government General Degree College, Mohanpur, Paschim Medinipur, WB. PIN – 721436. Email: dakshayani.mahapatra@gmail.com Phone: +91-9830655682
Dr. Sumit Kumar Gautam	Lead Scientist, Clear Meat Pvt. Ltd., B 78, First Floor, Sector 2, Noida, Near Sector 15 Metro Station. PIN – 201301. Email: sumit.k@clearmeat.com Phone: +91-8826954099