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, 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, amplified with the capability to think outside-the-box.

Summary of Skills

Core Skills	• **Cell culture protocols** a) *Primary stem cell culture* – tissue isolation, stem cell enrichment, cryopreservation, FACS, immunostaining, MTT assay, b) *Secondary cell culture* – subculture, complete media formulation and serum handling, Trypan Blue staining, lysis, c) *Bacterial cultures* – 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) *Correlation studies* – scatter plots, heatmaps, connected scatter plots, b) *Ranking studies* – bar graphs, circular bar graphs, spider plots, dendrogram plots, c) *Proportion studies* – 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** *Rattus norvegicus* (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	• **Programming languages** a) *Typesetting* – Groff [1], LaTeX, Markdown, HTML, b) *Big data and database management* – R, SQL, c) *Basic scripting and automation* – 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.

2014 - 2021 | **CSIR-Institute for Genomics & Integrative Biology (IGIB)** – New Delhi
Research Fellow
Meticulously worked under the supervision of Dr. Sagarika Biswas to accomplish:
• 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)*data visualization* lik e scatter plots for correlation studies, pie charts for proportion studies, dendrogram plots for hierarchical studies, and, b) *statistical analysis* 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*Cytokine-mediated modulation of stem cell behaviour in rheumatoid arthritis*.

2011 - 2012 | **DBT-Centre for DNA Fingerprinting & Diagnostics (CDFD)** – Hyderabad
Research Fellow
Worked under the guidance of Dr. Subhadeep Chatterjee to achieve:
• plasmid vector engineering and establishment of bacterial cultures
• bacterial genetic engineering using electroporation and validation using PCR
– thesis titled*Pr obing plant-microbe interactions in Xanthomonas quorum sensing*.

Awards & Achievements

2014 | **CSIR-UGC National Eligibility Test (NET) for JRF & LS** – CSIR
Rank –*CSIR 064*

2013 | **CSIR-UGC National Eligibility Test (NET) for JRF & LS** – UGC
Rank –*UGC 048*

2012 | **Graduate Records Examination (GRE)** – ETS
Percentile Rank – • *Verbal Reasoning – 64* • *Quantitative Reasoning – 82*

2011 | **Graduate Aptitude Test in Engineering (GATE)** – IIT Madras
Rank – *515*

2010 | **CSIR-UGC National Eligibility Test (NET) for JRF & LS** – CSIR
Rank –*CSIR 091*

2006 | **DST-Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship** – IISc Bangalore
National Level Science Talent Search Examination (NSTSE) – Unified Council India, Hyderabad
Rank – *352*

Publications & Posters

2020 | Sarkar, A., Sharma, S., Agnihotri, P., **Sarkar, T.**, Kumari, P., Malhotra, R., Datta, B., Kumar, K., Biswas, S. *Synovial fluid cell proteomic analysis identifies upregulation of alpha-taxilin proteins in rheumatoid arthritis: a potential prognostic marker.* 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
CSIR-Institute of Genomics & Integrative Biology, New Delhi

2014 | **Junior Research Fellow** – University Grants Commission
CSIR-Institute of Genomics & Integrative Biology, New Delhi

2011 | **Junior Research Fellow** – Council for Scientific & Industrial Research
DBT-Centre for DNA Fingerprinting & Diagnostics, Hyderabad

2011	**Master of Science** – Utkal University, Bhubaneswar *PG Department of Biotechnology, Utkal University, Bhubaneswar*
2009	**Bachelor of Science with Honours** – University of Calcutta *erstwhile Presidency College, now Presidency University, Kolkata*

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