

# Tanmoy Sarkar

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[https://github.com/elvenkingfeanor/my\\_cv](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. Possesses a wide variety of skill set, ranging from stem cell culture to data visualization and analysis to clinical physiology to biomedical communications, required in either a laboratory or clinical settings. Ancillary technical ability of a variety of programming languages and Linux tools, means rapid multitasking, resulting in efficient time management.

## Summary of Skills

Core Skills	<ul style="list-style-type: none"><li>• <b>Cell culture protocols</b> 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</li><li>• <b>Proteomics</b> SDS-PAGE, 2D-PAGE, ELISA, MALDI-TOF, HPLC, Western blotting, spot analysis</li><li>• <b>Genetic engineering</b> gene cloning, vector engineering, electroporation, qRT-PCR, cDNA, restriction mapping, epigenetic profiling</li><li>• <b>Microscopy</b> confocal microscopy, live-cell imaging, inverted microscopy, compound microscopy for histological, hematological and microbial studies.</li><li>• <b>Data visualisation</b> using R statistical programming language 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</li><li>• <b>Statistical data analysis</b> t-tests, Mann-Whitney tests, Chi-square tests, ANOVA analyses.</li><li>• <b>Biomedical communications</b> academic writing including bibliography management using BibTeX, proposal and grant writing, research and reporting, collaboration</li><li>• <b>Laboratory animal handling</b> <i>Rattus norvegicus</i> (laboratory rat) strains – Wistar, Sprague Dawley</li><li>• <b>Clinical physiology</b> sphygmomanometry, phlebotomy, spirometry.</li><li>• <b>Clinical biochemistry</b> blood sugar, blood uric acid, serum urea estimations.</li><li>• <b>Bioinformatics strategies</b> BLAST, FASTA3, ClustalW</li><li>• <b>Biological instrumentation</b> BD FACScalibur, Roche LightCycler 480, Biorad Image Lab, Nanodrop</li></ul>
Technical skills	<ul style="list-style-type: none"><li>• <b>Programming languages</b> a) <i>Typesetting</i> – Groff <sup>1</sup>, LaTeX, Markdown, HTML, b) <i>Big data and data-base management</i> – R, SQL, c) <i>Basic scripting and automation</i> – Bash, Lua, Python</li><li>• <b>Git-based version control systems</b> git, diff, patch</li><li>• <b>Image editing and quantitation</b> ImageJ, PDQuest, Inkscape, GIMP, imagemagick</li><li>• <b>Linux sysadmin tools</b> vi, cron, ssh, sed, awk, grep, find, fdisk, systemd, ip, curl, wget, grub</li><li>• <b>Advanced MS-Office proficiencies</b> pivot table creation, batch operations</li><li>• <b>Advanced Web-based skills</b> OAuth2 token, XML feed generation, search engine optimization (SEO)</li></ul>
English Skills	Excellent verbal and written communication skills <sup>2</sup> , 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

<sup>1</sup> This document was prepared in the vi text editor using groff typesetting language.

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

2014 - 2021	<b>CSIR-Institute for Genomics &amp; Integrative Biology (IGIB) – New Delhi</b> <i>Research Fellow</i> Meticulously worked under the supervision of Dr. Sagarika Biswas to accomplish: <ul style="list-style-type: none"> <li>• setup viable cell culture laboratory and standardized stem cell culture protocols</li> <li>• performed RNA and protein studies on patient samples</li> <li>• carried out animal handling and dissection in accordance with ethical committee procedures</li> <li>• additionally, arranged seminars, guided trainees, collected samples, and other laboratory related subsidiary works</li> </ul> – thesis titled <i>Cytokine-mediated modulation of stem cell behaviour in rheumatoid arthritis</i> .
2011 - 2012	<b>DBT-Centre for DNA Fingerprinting &amp; Diagnostics (CDFD) – Hyderabad</b> <i>Research Fellow</i> Worked under the guidance of Dr. Subhadeep Chatterjee to achieve: <ul style="list-style-type: none"> <li>• plasmid vector engineering and establishment of bacterial cultures</li> <li>• bacterial genetic engineering using electroporation and validation using PCR</li> </ul> – thesis titled <i>Probing plant-microbe interactions in Xanthomonas quorum sensing</i> .

## Awards & Achievements

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

## Publications & Posters

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

## Educational Background

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

## References

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Dr. Sagarika Biswas	Scientist 'F', CSIR-IGIB, Proteomics lab, Room 311, North Campus, Mall Road, near Jubilee Hall, Delhi University campus, Delhi – 110007. Email: <i>sagarika.biswas@igib.res.in</i> Phone: +91-1127662581
Dr. Dakshayani Mahapatra	Assistant Professor (WBES), Dept. of Physiology, Government General Degree College, Mohanpur, Paschim Medinipur, WB. PIN – 721436. Email: <i>dakshayani.mahapatra@gmail.com</i> 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: <i>sumit.k@clearmeat.com</i> Phone: +91-8826954099