# Tanmoy Sarkar

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+91-7982143662 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 to clinical physiology to biomedical communications, required in either a laboratory or clinical settings. Additional technical ability of a variety of programming languages and Linux tools, means rapid multitasking, resulting in efficient time management.

# **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
- **Molecular biology techniques** a) *Protein-based assays* 2D-PAGE, ELISA, MALDI-TOF, HPLC, Western blotting, b) *DNA/RNA-based assays* 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 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
- Biostatistical procedures t-tests, Mann-Whitney tests, Chi-square tests, ANOVA analyses.
- **Biomedical communications** Academic writing including bibliography management, Proposal and Grant writing, Research and reporting
- 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 <sup>1</sup>, LaTeX, Markdown, HTML, b) *Big data and data-base 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<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>&</sup>lt;sup>1</sup> This document was prepared in the vi text editor using groff typesetting language.

<sup>&</sup>lt;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 **CSIR-Institute for Genomics & Integrative Biology** – 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
- 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** – Hyderabad

Research Fellow

Worked under the guidance of Dr. Subhadeep Chatterjee to achieve:

- restriction enzyme-based plasmid modifications towards bacterial genetic engineering
- thesis titled*Pr obing plant-microbe interactions in Xanthomonas quorum sensing*.

## **Awards & Achievements**

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

#### **Publications & Posters**

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 α-taxilin proteins in rheumatoid arthritis: a potential prognostic marker. Journal of Immunology. DOI: 10.1155/2020/4897983
 38th All India Cell Biology Conference and International Symposium on Cellular Response to Drugs –

**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	<b>Junior Research Fellow</b> – Council for Scientific & Industrial Research <i>DBT-Centre for DNA Fingerprinting &amp; Diagnostics, Hyderabad</i>
2011	Master of Science – Utkal University, Bhubaneswar PG Department of Biotechnology, Utkal University, Bhubaneswar
2009	<b>Bachelor of Science with Honours</b> – University of Calcutta erstwhile Presidency College, now Presidency University, Kolkata

#### References

Dr. Sagarika Biswas

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