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Professional Summary

Scientist with a PhD in Biochemical Engineering and over five years of international postdoctoral experience across Europe and Asia, specializing in microbiology, assay development, microfluidics, and biosensing. Proven ability to lead method development, troubleshoot analytical workflows, and translate complex research into robust, scalable solutions. Known for scientific rigor, innovation, and a hands-on, execution-focused mindset—ready to thrive in a fast-paced CDMO environment and contribute to client-driven, GMP-compliant biopharmaceutical development.

Core Competencies

- Analytical method development & validation (non-GMP to GMP transfer readiness)
- Digital microfluidics for microbial screening and process optimization
- Biosensor development: aptamer-based, electrochemical, point-of-care platforms
- Cross-functional collaboration with QC, production, QA, and regulatory teams
- Data interpretation, troubleshooting, and protocol standardization
- Scientific leadership, mentoring, and inter-team communication

Professional Experience

Postdoctoral Researcher
Technical University of Denmark (DTU), Copenhagen, Denmark
Nov 2021 – Present

- Spearheaded development of a digital microfluidics platform to miniaturize and accelerate microbial screening for strain development and process analytics.
- Designed and executed assay workflows with a focus on reproducibility, scalability, and high-throughput efficiency.
- Filed two patents for innovations in biosensing and electrochemical assay platforms.
- Coordinated with interdisciplinary teams (engineers and microbiologists) to streamline protocol integration into broader biotechnological pipelines.
- Investigated transfusion-induced RBC mortality using complex bioanalytical and electrochemical assays, emphasizing root-cause analysis and performance metrics.

National Postdoctoral Fellow
Translational Health Science and Technology Institute (THSTI), India
Mar 2019 – Oct 2020

- Developed and validated an aptamer-based electrochemical sensor for real-time pesticide detection in food samples.
- Optimized assay conditions for sensitivity, selectivity, and reproducibility using real sample matrices.

Project Scientist
AptaBharat Innovation Pvt. Ltd., India
Apr 2018 – Oct 2018

- Led sensor development for a portable diagnostic tool targeting Tuberculous Meningitis.
- Oversaw analytical integration and coordinated prototype testing across engineering and biomedical teams.
- Contributed to early-stage validation and feasibility studies for clinical testing.

PhD Researcher
Indian Institute of Technology Delhi, India
2012 – 2018

- Investigated redox proteins for bioelectronic applications.
- Conducted electrochemical studies and prototype fabrication for functional bio-devices.
- Authored high-impact publications and presented findings at international conferences.

Key Achievements

- **2 Patents** filed on biosensor innovation
- **5 Peer-reviewed publications** as lead author in bioengineering and diagnostics
- **3 Master's students** supervised on biosensor and device development projects
- **Bronze Medal** at iGEM Synthetic Biology Competition as project lead

Education

PhD in Biochemical Engineering and Biotechnology (with Distinction)
Indian Institute of Technology Delhi (2012–2018) — CGPA: 7.95/10
Bachelor of Engineering in Biotechnology (with Distinction)
Delhi Technological University (2007–2011)

Technical Proficiencies

- **Analytical Tools:** UV-Vis, electrochemistry, digital microfluidics, biosensor fabrication
- **Molecular Biology:** Cloning, PCR, gel electrophoresis, protein purification
- **Microfluidics:** Digital droplet manipulation, multiplex screening platforms
- **Programming/Data:** Python (basic), Excel, statistical analysis tools
- **Documentation:** Protocols, SOPs, internal reports, manuscript writing

Soft Skills & Leadership

- Strong communicator with proven ability to translate technical data into actionable insights
- Experienced in cross-functional and multicultural collaborations across academic, clinical and industry environments
- Demonstrated leadership as Co-Lab Responsible (2022–2024)**,** supervising lab operations and compliance
- Actively mentored MSc students and junior researchers
- Event organizer and team builder, both in academic and professional settings

Fellowships & Awards

- ICMR Centenary Postdoctoral Fellowship
- Dr. D.S. Kothari Postdoctoral Fellowship
- DST-SERB National Postdoctoral Fellowship
- Travel Grants: Otto Mønsted Fonden (Denmark), ICMR (India)

Available immediately | **Work Permit: Denmark (EU Resident)**