PALAK NAGAR

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SUMMARY

Results-driven Biotechnologist with **4+ years of experience** in Molecular Biology and Immunotoxicology. Skilled in flow cytometry, data reporting, and experimental optimization. Proficient in SDS-PAGE, ELISA, qPCR, gene cloning, and DNA/RNA extraction. Known for analytical thinking, attention to detail, strong presentation skills, and ethics-driven, compliance-focused decision making.Seeking to contribute to research roles in toxicology, cell analysis, and drug development. Strong foundation in Good Laboratory Practices (GLP), Standard Operating Procedures (SOPs), and technical documentation.

SKILLS

- **Wet Lab**: SDS-PAGE, ELISA, Western blot, PCR, qPCR, gel electrophoresis, spectrophotometry, cell culture, gene cloning, blotting, DNA/RNA extraction, protein purification
- **Molecular Biology & Analysis**: Nucleic acid extraction, DNA sequencing, bacterial transformation, FlowJo, GraphPad Prism, Python, C++
- **Software & Tools**: MS Office Suite, FACS sorting, LIMS, ELNs, data visualization
- **Compliance & Reporting**: GLP/GCP, SOPs, biosafety protocols, regulatory documentation, TSRs, audit support
- **Communication & Collaboration**: Technical writing, data presentation, cross-functional teamwork, decision-making
- **Core Competencies**: assay development, sample preparation, reagent management, molecular diagnostics, quality control, troubleshooting, protocol development, data integrity, biological assays

EXPERIENCE

Scientific Researcher, Immunotoxicology
GlaxoSmithKline | Collegeville, PA **Sept 2024 – Apr 2025**

- Spearheaded high-stakes immunotoxicology research, including the execution of multicolour flow cytometry on red blood cells (RBCs).
- Drove significant improvements in lab method by developing and implementing new protocol, resulting in a **35% increase in data reliability**.
- Meticulously executed PBMC isolation and TBNK analysis, maintaining a **99% accuracy rate** critical for downstream research.
- Championed cross-functional initiatives that successfully **reduced variability in risk assessments by 28%**.
- Ensured strict adherence to **GLP and Good Clinical Practice (GCP)** guidelines by meticulously reviewing Technical Study Reports (TSRs).
- Provided key scientific insights and data-driven recommendations during critical research reviews and decision-making meetings.

Molecular Biology Researcher
Texas A&M University | College Station, TX **Oct 2023 – Sept 2024**

- Accelerated microbial research by developing a novel time-correlation method for CFU analysis, **increasing efficiency by 50%**.
- Investigated the efficacy of various antibiotics on *E. coli* through detailed motility assays, helping us understand of bacterial resistance.
- Enhanced the precision of molecular testing by designing and implementing sophisticated molecular screening protocols.
- Expertly managed ELNs and inventory, leading to a **15% reduction in material waste** and optimizing resource allocation.
- Effectively communicated complex research findings to diverse audiences using clear summaries and compelling visual tools.
- Actively supported the preparation of grant applications and maintained comprehensive biosafety documentation.

Genetic Engineering Assistant
Vezeo, India | Ahmedabad, India **Mar 2019 – Dec 2021**

- Engineered enhanced, disease-resistant crops using gene editing and recombinant DNA technologies to improve agricultural resilience.
- Evaluated a range of eco-friendly fertilizers, contributing to the development of sustainable and environmentally conscious practices.
- Conducted crucial bioassays on beneficial microbial strains, to assess their impact on plant growth and health.
- Confirmed successful gene expression and manipulation through a variety of techniques, including **PCR, SDS-PAGE, and DNA extraction**.
- Authored detailed technical reports and presentations for stakeholders and R&D teams, translating complex data into actionable insights.
- Collaborated on multidisciplinary agricultural biotechnology projects, fostering a team-oriented approach to problem-solving.

ACADEMIC PROJECTS

- Engineered **next-generation biocompatible scaffolds** using eggshell derivatives and sodium alginate for optimal cell adhesion.
- Pioneered **biomaterial research** with discarded eggshells for **tissue engineering applications**.
- Analyzed eggshell microstructural properties via imaging and biochemical assays, validating their use as sustainable scaffold materials.
- Optimized sodium alginate bio-ink for ideal viscosity, printability, and cellular compatibility.

EDUCATION

Texas A&M University, College Station, TX
Master of Biotechnology
University of Engineering & Management, Kolkata (UEM)
Bachelor of Engineering in Biotechnology

CERTIFICATIONS

- Biosafety Level 2 Training
- Bloodborne Pathogens Training
- Class 2 Biosafety Cabinets Use
- General Laser Safety
- Lab Safety Training
- Responsible Conduct of Research (CITI Program)