Pinkesh Patel | pinkeshpatel422@gmail.com | +44(0)7742462604 | Pinkesh Patel |

## Personal statement

A biotechnologist, with an understanding of data analysis in biological science and a profound interest in targeted drug delivery. Proven experience of two independent projects involving cell culture, immunoassays, statistical analysis, and scientific writing.

## Education

**MSc Drug design and Biomedical science**, Edinburgh Napier University, UK (Jan '23- May '24)

- Relevant modules: Immunology, toxicology, computer aided drug design
- Graduated with distinction

**MSc (Integrated) Biotechnology**, Sardar Patel University, India (Jun '19- Nov '21)

- Relevant modules: Cell biology, Advanced Molecular biology, 'O'-mics, Advanced Immunology
- Graduated with distinction

**BSc Biotechnology**, Sardar Patel University, India (Jun '16 – May '19)

- Relevant modules: rDNA technology, Genetic engineering, Bioinformatics, Developmental biology
- Graduated with distinction

## Employment experience

**Support Manager**, Pizza Hut restaurant, Edinburgh, UK (Dec '23-Present)

- Ensured compliance with health and safety regulations (COSHH guidelines) by coordinating with senior management and maintain documentations using GDP for audits
- Developed SOPs, risk assessments, deployed a continuous improvement model for team development and taking strong independent decisions to ensure no hazard impacts workflow

## Research Experience

**Dissertation 2024**, Edinburgh Napier University (ENU), UK (Jan '23-May '24)
**Research project:** "Nano silver and nano cellulose mediated inflammatory and cell survival responses in lung epithelial cells"

- Cultured A549 cells and handled nanoparticles in biosafety cabinets
- Applied end-point assays ELISA to quantify IL8 concentration in response to inflammation
- Used WST1 assay to estimate the metabolic activity of the cells
- Tested null hypothesis using student-T-test and ANOVA between different experimental conditions and visualised results in form of bar charts

**Dissertation 2021**, Sardar Patel University (SPU), India (Jun '16-Nov '21)
**Research project:** "Bioactivity enhancement of curcumin using carbon nanodots"

- Synthesised carbon dots using Teflon lined autoclave from orange and banana fruit peels
- Characterized carbon dots using HRTEM, FTIR, DLS, UV visible, Fluorescence Spectroscopy
- Conjugated curcumin on carbon dots at different concentrations
- Tested antimicrobial and antioxidant activity to compare the efficacy and increase in bioavailability

## Skills

- **Cell Biology:** Mammalian cell culturing and maintenance | Cell counting | Lentiviral infection assays | Live/Dead cell viability assay | Designing drug screening experiments| Cell migration assay
- **Molecular Biology:** DNA, RNA and Protein extraction | Molecular cloning and transformation | RT-qPCR | Gel electrophoresis | SDS-PAGE | Western blotting | Nanodrop quantification | UV-spectrometry based quantification | Enzyme activity assay | ELISA
- **Bioinformatics:** R programming | Sequence alignments using HISAT2-Stringtie-feturecounts pipeline | Phylogenetic tree construction | Correlation analysis | RNAseq and microarray data analysis| Single-cell transcriptomic analysis | PCA analysis | Differential gene expression analysis | NCBI tools handling | gRNA designing |Reactome
- **Microbiology:** Media preparation and sterilization using autoclave and filtration methods | Microbe handling and culturing | Colony/Plaque forming assay | Antibiotic susceptibility testing | Growth-curve analysis | Bio availability assay
- **Transferrable:** Leadership | Time management | Team management | Collaboration | Communication | Team work | Group projects

## Publications

- **Patel, P. J.***, Gupte, S., Naik, R., Kailasa, S. K., Jha, S., Patel, S. B., & Mehta, V. N. (2024). Fruit Peel Derived Carbon Dots for Improved Curcumin Delivery: A Promising Strategy for Enhanced Antimicrobial and Antioxidant Activity. Chemistry Select, 9, e202400762. https://doi.org/10.1002/slct.202400762

## Presentations

- Poster presentation – Recent Advances in Interdisciplinary Science and Technology (RAIST-2019), SPU
- Secured a 10/10 GPA for defense of the research thesis against a university panel, with the help of power point presentation followed by a viva
- Presented 10+ research articles with critical analysis as a part of coursework against a university panel and peers

## Academic citizenship

- Collaborated with nanotechnology lab for access to instrumentation and guidance for research project
- Volunteered hypertension awareness and blood donation camp for 4 years at SPU
- Volunteered for NSS camp for three years for community service across two different villages
- Supported colleagues and lab mates to understand data analysis and visualization using BioRender Image J, GraphPad Prism and Origin Pro through tutorials
- Class representative at Student council SPU for 2 years
- Organized laboratory for practical sessions by setting up instruments, chemicals, and SOPs
- Helped to organize a 6 days crash course for CSIR-NET examination from funding received by GSBTM

## Honors and certifications

- Graduate Aptitude Test in Engineering (Life Sciences), India: Achieved all India rank 8239 (2021)
- Drug Development Product Management – University of California, San Diego, Coursera (2022)
- Introduction to Intellectual Property – University of Pennsylvania, Coursera (2022)