

Deepak Kumar Singh

Education

- 2017–2024 : **Ph.D. Molecular Microbiology**, Jamia Millia Islamia, New Delhi India.
2012–2014 : **MSc. Biotechnology**, C.S.J.M. University, Kanpur, UP.
2009–2012 : **BSc. Biotechnology**, C.S.J.M. University, Kanpur, UP.

Research Experience

- At present : **Assistant Manager**, Research & Development, Cell & Gene Therapy Unit.
Micro CRISPR Pvt. Ltd. New Delhi
- 2019 – 2024 : **Senior Research Fellow**, Multidisciplinary Centre for Advanced Research and Studies, **Jamia Millia Islamia, New Delhi**.
Investigating the role of cohesion in DNA double-strand break repair along the genome of *E. coli*.
- 2017 – 2019 : **Junior Research Fellow**, Multidisciplinary Centre for Advanced Research and Studies, **Jamia Millia Islamia, New Delhi**.
Chromosome cohesion mediated regulation of homologous recombination process in *E. coli*.
- 2016 – 2017 : **Junior Research Fellow**, ICAR-Indian Veterinary Research Institute, Bareilly, UP.
Molecular characterization of *Brucella* species of diverse origin.
- 2014 – 2015 : **Research & Development Executive**, Panacea Biotec Pvt. Ltd. Mohali, Punjab.
Investigation of vaccine efficiency on pre & post-vaccination sera samples by immuno & cell-based assays.
- 2013 : **Dissertation trainee**, CSIR-National Botanical Research Institute, Lucknow, UP.
Molecular detection of *Begomovirus* infection in *Jatropha curcas*.

Technical Skills

- Microbiology** Aseptic technique, sterile handling, isolation & purification of strains, deletion mutant strain construction, growth curve analysis, MIC, MBC, cell survival assay, bacteriophage isolation & purification, fluorescence microscopy, live cell imaging, flow cytometry.
- Molecular Biology** DNA/RNA extraction, plasmid construction, cloning, transformation, primer design, PCR, qRT-PCR, dd-PCR, electroporation, southern blotting, transduction.
- Cell Biology** Cell-line maintenance, transfection, transduction, cell survival assay.
- Data analysis** MS Excel, Prism, FlowJo, ImageJ, Zen Blue, .
- Data visualization** MS Powerpoint, BioRender, Inkscape, .

Fellowships & Awards

- 2022 EMBO- International Travel award
2022 DBT- International Travel award
2020 –2023 UGC-Senior Research Fellow
2018 – 2020 UGC-Junior Research Fellow
2015 GATE-Biotechnology

Conferences & Workshops

- Nov, 2023 Poster presentation at Indo-US International conference on **Antimicrobial Resistance and Human Microbiome (ARHM 2023)** THSTI, Faridabad, India
- Dec, 2022 Poster presentation at International conference **Chromosome Stability**, at IISER Thiruvananthapuram, Kerala.
- July, 2022 Poster presentation at International conference **"EMBO-Dynamic Kinetochore"**, at Oslo, Norway.
- Aug, 2019 Attended **B4 Bio-Imaging Workshop** organized by **The Laxmi Mittal & Family South Asia Institute and Harvard University** at **Indian Institute of Science Education & Research, Pune**.
- July, 2019 Attended **3rd Meeting on Molecular Microbiology (M3)** organized by **Dept. of Biotechnology** at **Centre for DNA Fingerprinting & Diagnostics, Hyderabad**.

Teaching Assistantship

- 2021 : **ITBS:101 Innovative Technology & Bio-Sciences, Department of Applied Sciences & Humanities**, Jamia Millia Islamia, New Delhi.

Publications

- 2025 **DEEPAK KUMAR SINGH**, Amir Faraz, Sabri Shankar Thirupati, David Bates and Mohan C. Joshi **SeqA mediated cohesion modulates efficiency and fidelity of site-specific DNA double-strand break repair in *E. coli***. (*Under revision in Communication Biology*),
- 2024 **DEEPAK KUMAR SINGH**, Amir Faraz and Mohan C. Joshi **Loss of SeqA leads to abnormal cell phenotype and reduced stress gene expression during rapid growth in *E. coli***. In *Biochemical & cellular archives* <http://dx.doi.org/10.51470/BCA.2024.24.1-S.3407>
- 2023 Shabina Quadir, Nuha Abeer Khan, **DEEPAK KUMAR SINGH**, Amir Faraz, Gagan Deep Jhingan and Mohan Chandra Joshi. **Exposure to high dosage of Gold nanoparticles accelerates growth rate by modulating ribosomal protein expression**. In *ACS NANO* (<https://pubs.acs.org/doi/10.1021/acsnano.3c01973>)
- 2021 Iqbal Azmi, Md Imam Faizan, Rohit Kumar, Siddharth Raj Yadav, Nisha Chaudhary, **DEEPAK KUMAR SINGH**, Ruchika Butola, Aryan Ganotra, Gopal Datt Joshi, Gagan Deep Jhingan, Jawed Iqbal, Mohan Chandra Joshi, and Tanveer Ahmad. **A Saliva-Based RNA Extraction-Free Workflow Integrated with Cas13a for SARS-CoV-2 Detection**. In *Frontiers in Cellular and Infection Microbiology* (<https://doi.org/10.3389/fcimb.2021.632646>)

Referees

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Dr. Dharendra Kumar Singh

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