

# VIJAY SINGH

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## SUMMARY

Experienced cancer biologist with expertise in molecular diagnostics and clinical biochemistry. Skilled in RT-PCR, ELISA, and data analysis using SPSS, GraphPad Prism, and R. Published researcher with a track record of impactful findings. Committed to advancing precision medicine and driving groundbreaking discoveries.

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## EXPERIENCE

**Researcher, 10/2022 - 10/2024**

**All India Institute of Medical Sciences**

- Research Experience: Conducted a study on 'Evaluation and Comparison of TAP-1/2 Proteins and Inflammatory Markers in Oral Squamous Cell Carcinoma and Premalignant Lesions'.
- Investigated TAP-1 and TAP-2 protein expression and inflammatory biomarkers (CRP, creatinine, ferritin, ESR) across OSCC, premalignant, and healthy control groups.
- Contributions included protocol design, ethical approval, participant recruitment, gene expression analysis (using Trizol RNA Isolation), and data collection and interpretation.
- Findings aimed to identify diagnostic or therapeutic targets for oral cancer progression.
- Conducted literature reviews and synthesized research to identify gaps in knowledge and inform project objectives.
- Analyzed data using statistical software programs such as SPSS, STATA, SAS, and R.
- Published experimental and research findings in scientific publications and journals.
- Completed peer reviews of published work to validate theories and locate errors.

**TB Lab Technician**

**All India Institute of Medical Sciences**

- Proficient in culturing Mycobacterium TB, AFB slide preparation, Auramine Rhodamine staining, serological testing, bacterial culture, antimicrobial susceptibility testing, and CBNAAT for Mycobacterium TB
  - Trained in biochemistry, microbiology, hematology, histopathology, and transfusion medicine as part of undergraduate coursework
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## PERSONAL DETAILS

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**Phone:** 7978462302

**Email:** vijaysingh110021@gmail.com

**WWW:** [Bold Profile](#)

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## CERTIFICATIONS AND COURSES

- Statistical Modeling with IBM SPSS
  - GraphPad Prism Proficiency
  - Biorender Design Expertise
  - Fundamentals of R
  - Skilled in Microsoft Office Suite
  - Research Manuscript Development
  - Citation Software Experience
  - Proficient in Teaching
  - Molecular Biology Techniques: Gene Expression
  - Analytical Instrumentation Skills
  - Literature review
  - Fieldwork experience
  - Data collection and organization
  - Deep-dive data analysis
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## WEBSITES, PORTFOLIOS, PROFILES

- <https://www.linkedin.com/in/vijay-singh-2863a621b/?>

## ACADEMIC QUALIFICATIONS

### MSc, Medical Biochemistry, 10/2024

**All India Institute of Medical Sciences** - Gorakhpur, Uttar Pradesh, India

Percentage: 58%

### Participated in the ( Events, Workshop, or Seminar)

- One-month international workshop on Bioinformatics for Drug Discovery 2023. Conducted between 20 May 2023 to 13 June 2023. {Decode/BDD/373}.
- Actively Participated as a delegate in the two-day workshop on “Basic of Molecular Techniques; Hands on Experience” organized by the Department of Microbiology, All India Institute of Medical Sciences, Gorakhpur [Held From 25 th to 28th August 2023].
- Actively Participated as a delegate in the CME on Next Generation Sequencing organized by the Department of Microbiology, All India Institute of Medical Sciences, Gorakhpur.

### Projects and Research:

#### Publications – 7

1. Singh V, Dwivedi S, Agrawal R, Sadashiv, Fatima G, Abidi A. The Human Monkeypox Virus and Host Immunity: Emerging Diagnostic and Therapeutic Challenges. Infect Disord Drug Targets. 2024 Aug 16. doi: 10.2174/0118715265309361240806064619. Epub ahead of print. PMID: 39161149.
2. Dwivedi, S., Singh, V., Sen, A. et al. Vitamin D in Disease Prevention and Cure-Part I: An Update on Molecular Mechanism and Significance on Human Health. Ind J Clin Biochem (2024). <https://doi.org/10.1007/s12291-024-01251-7>
3. Dwivedi S, Singh V, Agrawal R, Misra R, Sadashiv, Fatima G, Abidi A, Misra S. Human Monkeypox Virus and Host Immunity: New Challenges in Diagnostics and Treatment Strategies. Adv Exp Med Biol. 2024; 1451:219-237. doi: 10.1007/978-3-031-57165-7\_14. PMID: 38801581.
4. Singh, V., Dwivedi, S., Singh, B.P. et al. Unveiling the Zinc Paradox: Balancing Act in Reproductive Health and Prostate Pathology. Ind J Clin Biochem (2024). <https://doi.org/10.1007/s12291-024-01183-2>.
5. Yadav A, Singh V. Strengthening Public Health Systems to Combat the Rising Threat of Nipah Virus: A Call for Global Preparedness and Response. Adv Exp Med Biol. 2024 Nov 23. doi: 10.1007/5584\_2024\_836. Epub ahead of print. PMID: 39576495.
- 6. Islam A. Singh V. et.al. Revolutionizing Cancer Treatment: Exploring Novel Immunotherapeutics, Checkpoints, bispecifics, and Vaccines in Development. Advances in Immunology. <https://doi.org/10.1016/bs.ai.2024.10.005>.
- 7. Sen A. Singh V. et.al. DNA and mRNA vaccines: Significant therapeutic approach against cancer management. Advances in Immunology. <https://doi.org/10.1016/bs.ai.2024.10.007>.

#### Accepted for publication – 6 Papers

- 1. Singh V., Dwivedi S., Agrawal R., P.S. Mohan Raj et al. Transporter Associated with Antigen Processing Proteins (TAP-1, and TAP-2) Gene Expression were down-regulated in Oral Squamous carcinoma than

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- VIJAY SINGH (0009-0000-7283-6008)
- <https://scholar.google.com/citations?user=tzWBxvwAAAAJ&hl=en>
- <https://www.researchgate.net/profile/Vijay-Singh-180>
- Web of Science ResearcherIDLSJ-6526-2024

pre-malignant Oral subjects. Endocrine, Metabolic & Immune Disorders - Drug Targets. Manuscript No.-[BMS-EMIDDT-2024-303]

2. Dwivedi S, Singh V, Bansal A, Misra R, Tripathi A, Misra S. Repurposing of anti-viral agents in COVID-19. In: Pathogenesis, Management and Socio-economic Impact of COVID-19 Pandemic. Chapter 13.

3. Singh V, Sen A, Ranga SS, Dwivedi S, Agrawal R, Bansal A, Shekhar S. MicroRNA significance in cancer: an updated review on diagnostic, prognostic, and therapeutic perspectives. eJIFCC.

4. Sen A, Singh V, S.P. Cardiovascular Health and Disability: Prevention and Management (2024). The Palgrave Encyclopedia of Disability. Palgrave Macmillan, Cham.

- 5. Singh V, Sen A, Yadav A. Multivitamins in Chronic Disease Management for Disabilities (2024). The Palgrave Encyclopedia of Disability. Palgrave Macmillan, Cham.
- 6. Singh V, Bansal A, Dwivedi S, Exploring the Link Between Nutrition and Disability: Current Evidence and Future Directions (2024). The Palgrave Encyclopedia of Disability. Palgrave Macmillan, Cham.

### **BSc, Medical Laboratory Technology, 09/2021**

**All India Institute of Medical Sciences** - Bhubaneswar, India

- **Laboratory Training and Techniques:** Gained hands-on experience in biochemistry, microbiology, hematology, histopathology, cytopathology, and transfusion medicine labs. Conducted extensive testing and analysis using various laboratory equipment, including autoanalyzers for biochemical tests, CBC, ESR, and coagulation profiling.
- **Specimen Preparation and Testing:** Proficient in specimen handling and preparation, including peripheral blood smear analysis, tissue processing, special staining, and immunohistochemistry. Developed expertise in routine and specialized diagnostic procedures.
- **Transfusion Medicine:** Experienced in blood bank procedures, such as preparing platelet-rich plasma (PRP), packed RBCs, and performing reticulocyte counts, ensuring accurate and safe blood product handling.
- **Quality Control:** Conducted quality control protocols within biochemistry labs, ensuring accuracy and consistency in hormone and electrolyte analysis. Managed calibration and maintenance of lab instruments for reliable results.
- **Microbiology Specialization:** Skilled in culturing Mycobacterium TB, AFB slide preparation, Auramine Rhodamine staining, serological testing, bacterial culture, and antimicrobial susceptibility testing. Performed CBNAAT for TB detection, enhancing proficiency in tuberculosis diagnostics.

**12th, 01/2014**

**Kendriya Vidyalaya No. 1 Sadar Bazar Delhi Cantt** - Delhi Cantt, India

- Division/Class- 1st
- GPA: 72%

**10th, 01/2012**

**Kendriya Vidyalaya No. 1 Sadar Bazar Delhi Cantt** - Delhi Cantt, India

- Division/Class- 1st

- GPA: 83.6%
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## CERTIFICATIONS

- ICH GOOD CLINICAL PRACTICE E6 (R2)
  - Bioethics In Medicine
  - Basic Course in Biomedical Research
  - Ethics Review of Health Research
  - INTRODUCTION TO GOOD CLINICAL LABORATORY PRACTICE
  - Clinical management of patients with COVID-19 Investigations and care for mild, moderate and severe disease
  - NIECer 103: Scientific Writing in Health Research
  - Introduction To Reviewing Genomic Research
  - Ethics And Best Practices in Sharing Individual Level Research Data
  - Introduction to SPSS
  - Health Geography
  - Data Safety and Monitoring Board for Clinical Trials
  - Introduction to Clinical Research
  - RESEARCH IN GLOBAL HEALTH EMERGENCIES: ETHICAL ISSUES
  - CHILDREN AND CLINICAL RESEARCH
  - Human Prion Disease
  - HIV NEUROPATHY AND MYELOPATHY
  - Inequality analysis using R: Disaggregated data from surveys
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## AWARDSHONOURS - ACADEMICACHIEVEMENTS

Ranked first in BSc Medical Laboratory Technique

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## PROFESSIONALMEMBERSHIPS

Indian Society for Precision Medicine and Molecular Medicine (ISPM), General and Annual Member, To advance patient-specific healthcare by integrating genetic, molecular, and environmental factors in diagnosis and treatment.

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## HOBBIES AND INTERESTS

- Cancer
  - Molecular Biology
  - Gene Expression
  - Clinical chemistry
  - Nutrition Research
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## LABORATORY TECHNIQUES

- Quantitative Assays
  - ELISA
  - RNA Isolation
  - RNA Quantification
  - CDNA Preparation
  - CDNA Quantification
  - RT PCR
  - Autoanalyzers
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## LANGUAGES

**Hindi:** First Language

**English:** B2

Upper Intermediate (B2)