**Dr. Ragini D. Singh**

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## Academic Qualifications

| Degree | Institution | Field | Year |
|---|---|---|---|
| Ph.D. (Medical Biochemistry) | Pramukhswami Medical College, Karamsad (Sardar Patel University) | Medical Biochemistry | 2013 |

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## Professional Training & Experience

- **AIIMS, New Delhi** – Trained in cytogenetic and molecular diagnosis of genetic disorders.
- **Tumor Biology Centrum, University Klinikum Eppendorf, Hamburg, Germany** – Trained in genomics and proteomics.
- **Gujarat Cancer & Research Institute (GCRI), Ahmedabad** – 12 years of attachment in cancer research.
- **Certificate Courses**:
  - Basic Course in Biomedical Research (ICMR)
  - Data Science & Decision Science (**IIT Delhi**, Mar 2024–Feb 2025)

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## Honors & Awards

- **Internship Scholarship** – Systematic Review & Meta-analysis Training, University of Sharjah (WAOCP)
- **KPS-PS Sinha Award** – Best paper in *Indian Journal of Clinical Biochemistry*
- **Landmark Paper Award** – *Oral Diseases* (2014), recognized at Indian Cancer Congress
- **National Scholarship & Bhama Shah Award** – University topper at undergraduate level

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## Additional Responsibilities

- Member, **Institutional Ethics Committee**, AIIMS Rajkot
- Guest Editor, Special Issues of *Critical Reviews in Oncogenesis* (PubMed-indexed journal)

## Current Projects

**Intramural**

1. Detection of salivary IL-6 and IL-8 as biomarkers for oral premalignant and malignant lesions.
2. Lipoprotein(a) profiling in children and adolescents in Saurashtra region.
3. Fetal hemodynamic monitoring during labor using Doppler and electronic fetal monitoring.
4. Integrating AI into undergraduate bioinformatics education using molecular biology tools.

**Extramural**

1. **GOAL-ASIA Study** (with Monash University, Australia) – Lipid-lowering strategies in Asia-Pacific (₹88.7 Lakhs).
2. **WHO STEPS Survey (Gujarat)** – Co-Investigator, statewide NCD risk factor survey.
3. ICMR-STS Project – Cardiovascular risk prediction in T2DM using hs-cardiac markers and HRV.
4. **Hypertension Support Project** – Co-Investigator, with Global Health Advocacy Incubator (USA)

## Research Highlights

### 1. Oral Cancer Biomarkers & Molecular Pathogenesis

- Landmark Work: Identified genetic polymorphisms (*CYP1A1*, *MMPs*) linked to oral cancer susceptibility and metastasis (cited in *Indian Cancer Congress 2013*).
- Ongoing Project: Salivary IL-6/IL-8 as non-invasive biomarkers for early detection (AIIMS intramural grant).

### 2. Innovations in Diagnostics & Therapeutics

- Meta-Analysis Expertise: Led 10+ systematic reviews (e.g., AI in diabetic kidney disease [*Curr Med Res Opin*, IF=2.5]; CRISPR/Cas9 in ovarian cancer).
- Clinical Applications: Validated mitochondrial DNA copy number as a disease biomarker (*APFCB News* 2024).

## 3. Public Health & Policy Impact

- State-Wide Surveys: Co-investigator for Gujarat's STEPS Survey (WHO-NCD risk assessment).
- Global Collaborations: Hypertension support project with *Global Health Advocacy Incubator (GHAI), USA*.

## Book Chapters

- *Role of IL-1 Polymorphisms in Cancer* – Academic Press, 2023.
- *Preeclampsia and Oxidative Stress* – BP International, 2022.

## Selected Publications (Recent & Representative)

1. Sharma DM, Singh DR. *South Eastern European J Public Health*. 2025.
2. Dholariya S, Singh R et al. AI in diabetic kidney disease. *Curr Med Res Opin*. 2024.
3. Singh RD et al. p53, MDM2, tobacco interaction and oral cancer. *APJCP*. 2023.
4. Singh RD. Multiple contributions to *Critical Reviews in Oncogenesis*, including guest editorials and reviews on oral cancer.
5. Singh R et al. *Antioxid Redox Signal*. 2022. [PMID: 36242099]

🔗 *Full publication list*: [NCBI Profile](NCBI Profile)