

**Dr. Dhara N. Jajal**

**Assistant Professor**

**Department of Medical Technology**

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**Academic qualifications:**

Degree	Specialization	University	Year
B.Sc.	Biochemistry	St. Xavier's College, Gujarat University	2009
M.Sc.	Biochemistry	Sardar Patel University	2011
Ph.D.	Biochemistry	Sardar Patel University	2018

**Experience:**

Research: 5.5 years

**Awards:**

- Awarded **Travel scholarship** to present at Experimental Biology 2017 (Annual meeting of American Society for Biochemistry and Molecular Biology – ASBMB, 2017), Chicago, USA.
- Awarded **Travel scholarship** to present at 5<sup>th</sup> International conference organized by SciGenom Research Foundation on “NextGen Genomics, Biology, Bioinformatics and Technologies (NGBT)”, 2016, Cochin.
- Best Paper award - 3<sup>rd</sup> prize at National Conference organized by Nirma University on “Diabetes and Its Complications”, 2013, Ahmedabad.
- Best Paper award - 2<sup>nd</sup> prize in a paper presentation at Science excellence-2010 organized by Gujarat University and GUJCOST.

**Peer-reviewed publications:**

- Shah, S., Jajal, D., Mishra, G., & Kalia, K. (2017). Genetic Profile Of Pten Gene in Indian Oral Squamous Cell Carcinoma Primary Tumors. Journal of Oral Pathology & Medicine, 46(2), 106-111.
- Jajal, D. N., & Kalia, K. (2017). Vascular Endothelial Growth Factor-A (VEGFA) Gene Polymorphisms and Genetic Predisposition of Retinopathy in Type 2 Diabetes Patients of India. International Journal of Advanced Biotechnology and Research, 8(1), 209-220.

- Jajal, D., & Kalia, K. (2017). Impact of VEGF Gene Polymorphisms on Progression of Diabetic Retinopathy in an Indian Population. The FASEB Journal, 31(1 Supplement), 780.10-780.10. (Conference Proceeding)
- Jajal, D., Panchani, A., & Kalia, K. (2017). Genetic Variations in Coding Region Of Vascular Endothelial Growth Factor (VEGF) And Risk Of Diabetic Retinopathy: A Primary Case-Control Study. Investigative Ophthalmology & Visual Science, 58(8), 1847-1847. (Conference proceeding)

### **Area of Interest/Research/Expertise:**

**Research Interest:** Genomics of Diabetes, Cancers and other diseases, Molecular approaches for searching new drug targets, Bionanotechnology

**Expertise:** Targeted sequencing of DNA using NextSeq of Illumina, PCR, Sanger sequencing, CAPS (Cleaved amplified polymorphic sequence), Electrophoresis, DNA & RNA isolation, cloning, SNP genotyping, Haplotyping, Biostatistics used for genomic association studies using R statistical package and GraphPad, Bioinformatics tools.

**Research:** We evaluated the genetic variations of the VEGFA (whole gene) and Calpain 10 genes among type 2 diabetes patients with retinopathy. We performed targeted sequencing of whole VEGFA gene using NextSeq platform of Illumina. We found some of the novel as well as reported genetic variations that may have role in the development of severe retinopathy among type 2 diabetes patients of Gujarat.

We worked on the mutations as well as common genetic variations in the candidate genes of PIK3C/ AKT pathway in association with Oral Squamous Cell Carcinoma (OSCC). We studied some of the coding regions of the targeted genes, PIK3CA, PTEN and EGFR to find somatic mutations in the included Indian population that may play role in OSCC development.

We studied V16A genetic polymorphism of MnSOD – an antioxidative enzyme, in association with nephropathy in type 2 diabetic patients of Gujarat.