

### **Dr. Suneel Dodamani**

Antimicrobial resistance in typhoid fever and dermatophytic infections has emerged as a major global health concern due to the widespread misuse of antibiotics and antifungal agents. Multidrug-resistant *Salmonella Typhi* and terbinafine-resistant dermatophytes have reduced treatment efficacy, necessitating the development of alternative therapeutic strategies. Nanotechnology offers promising solutions through nanoparticle-based drug delivery systems that enhance antimicrobial activity, improve bioavailability, and minimize toxicity. Synbiotic gels containing probiotics and prebiotics have also gained attention for their ability to restore microbial balance, inhibit pathogenic organisms, and promote wound healing and skin health. In addition, the human microbiome plays a critical role in regulating immunity, metabolism, and disease progression. Alterations in gut and skin microbiota are strongly associated with cancer development and susceptibility to infectious diseases. Understanding host–microbiome interactions may lead to innovative diagnostic markers and personalized therapeutic approaches for combating resistant infections and improving overall health outcome

### **Dr. Bhushan Kulkarni**

My research focuses on molecular genetics, cancer genomics, and translational biomarker discovery, with particular emphasis on oral cancer, breast cancer, and HPV-associated diseases. My current research group is investigating saliva-based genetic and epigenetic biomarkers for the early detection and risk prediction of oral potentially malignant disorders and oral squamous cell carcinoma. Ongoing Ph.D. projects in my laboratory include studies on ENAM gene polymorphisms linked to dental caries, epithelial–mesenchymal transition (EMT) multigene panels for early oral cancer diagnosis, SNP-based risk prediction models for oral submucous fibrosis, and promoter methylation of detoxification genes associated with oral leukoplakia and oral cancer. In parallel, I am involved in NAAT-based HPV diagnostics and studies on DNA methylation in breast cancer. My laboratory integrates molecular diagnostics, genomics, epigenetics, and translational research to develop clinically relevant biomarkers and precision medicine approaches

### **Dr. Shridhar Ghagane**

I am currently engaged in translational cancer research with a major focus on non-invasive molecular diagnostics for cancer. My ongoing work involves liquid biopsy-based detection of circulating tumor DNA (ctDNA), urinary biomarkers, VPAC receptor-targeted imaging assays, and molecular characterization of cancers. He is actively working on genomic biomarkers such as PCA3, PSCA, and SLC14A1 polymorphisms for early cancer diagnosis and prognosis. His research also extends to biosensor development, fluorescence-based cancer diagnostics, and AI-assisted histopathological applications. I have collaborated nationally and internationally, including with Thomas Jefferson

University, USA, on advanced molecular imaging and biofluid diagnostics. With expertise in molecular biology, RT-PCR, cell culture, clinical research, and translational oncology, he offers interdisciplinary PhD opportunities for candidates interested in cancer biology, biomarker discovery, precision diagnostics, and translational biomedical research.

### **Dr. Madhavi Patil**

Dr. Madhavi N. Patil is a Biochemist and Molecular Biologist with Ph.D in Molecular Biology and Genetics from Krishna Institute of Medical Sciences, Karad. She has experience in Cytogenetics and Molecular testing and COVID-19 detection tests by qRT-PCR. Her research centres on Cytogenetics and cancer genetics, with a particular emphasis on genetic polymorphisms in cancer-related genes and has conducted extensive studies across major cancer types, including oral, cervical, gastrointestinal, lung, and breast cancer. Through these investigations, her work aims to understand how genetic variations influence cancer susceptibility, progression, and response to treatment. Her work has resulted in over 51 research publications, contributing valuable insights to the field of oncogenetics and paving the way for more personalized approaches to cancer diagnosis and therapy. She is a recipient of the Best Researcher award, 2022-2023 at Krishna Vishwa Vidyapeeth for her contribution in the field of cancer genomics.

### **Dr. Priya Shetti**

My research focuses on natural product research, phytopharmaceuticals, and analytical sciences, with particular expertise in analytical method development and validation using HPTLC, HPLC, UHPLC, and UV–Visible spectroscopy. I specialize in the design and development of novel drug delivery systems within integrative medicine, including nanoformulations of phytoconstituents, nanoparticles, liposomes, ethosomes, phytosomes, pharmacosomes, and controlled-release formulations to enhance bioavailability and therapeutic efficacy, particularly in breast cancer research. My work also involves formulation development using solvent evaporation, emulsification, and nanoformulation techniques, along with in vitro, ex vivo, and in vivo studies to evaluate drug release, permeability, cytotoxicity, and therapeutic performance in skin and breast cancer models. In addition, I actively mentor students and junior researchers and contribute to interdisciplinary collaborations, scientific publications, technical reports, and grant proposal writing.

### **Dr. Rubeen Nadaf**

My research interests focus on investigating the correlation between host biomarkers and the blood microbiome in chronic obstructive pulmonary disease (COPD) and diabetes mellitus. My research team is actively engaged in studying diabetes-associated gene

polymorphisms in both Type 1 and Type 2 diabetes mellitus. In addition, our work encompasses investigations into lead toxicity and hypervirulent *Klebsiella pneumoniae* infections. I have authored 30 research publications in reputed national and international peer-reviewed journals and have actively mentored and supervised research projects in the fields of biomedical and life sciences.