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## Salivary Metabolomics and Oral Cancer

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Cancers of the oral cavity especially oral squamous cell carcinoma is a common malignancy associated with significant morbidity and mortality. Oral squamous cell carcinoma is a multifactorial disease characterized by a complex interplay of environmental factors and molecular alterations resulting in unhindered cell proliferation. Despite diagnostic and therapeutic advances, the disease remains a challenge for medical professionals with poor five-year survival rate. Lack of awareness of the precursor lesions of oral cancer, delayed diagnosis and absence of adequate screening and diagnostic modalities are some of the reasons for the poor survival rate of OSCC. Over time, the technological advancements have enabled us to unravel some of the intricate details of oral carcinogenesis. “Omics” technology encompassing genomics, proteomics, transcriptomics and metabolomics are increasingly being used in cancer diagnostics. Metabolomics is the study of metabolome which includes a repertoire of small molecules present in cells, tissues, organs and biological fluids. The metabolome is considered as the final downstream product and hence closest to the phenotypic nature of the cell. Analyzing the metabolomic profile could aid in identification

of tumor biomarkers in OSCC. Saliva as a diagnostic tool has gained wide acceptance owing to its non-invasive nature, ease of collection and the availability of sensitive and specific techniques for identification of minor quantities of the metabolite. This presentation provides an overview of the clinical significance of salivary metabolomics highlighting the importance of salivary based tumor biomarkers in oral cancer.

### Speaker Biography

Gokul Sridharan is currently working as an associate professor in the department of oral pathology and microbiology at YMT Dental College and Hospital, Navi Mumbai. He has obtained his Doctor of Philosophy (PhD) for his work titled “Salivary and serum metabolomics in oral leukoplakia and oral squamous cell carcinoma” and his field of interest includes oral pre-cancer, oral cancer, salivary diagnostics, metabolomics and oxidative stress. He has several scientific publications and actively contributes as a peer reviewer to numerous journals. He is an active member of editorial board of several journals of repute. Dr. Gokul Sridharan has undergone training and is a qualified diploma holder in medial law and ethics and is also certified in tobacco cessation and control.

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