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**Ajaikumar B. Kunnumakkra**

*Professor, Department of Biosciences and Bioengineering, Indian Institute of Technology Guwahati, India*

**Spices in the Prevention and Treatment of Oral Submucosal Fibrosis**

Oral submucous fibrosis (OSMF) is a chronic, fibrotic disorder of the mouth which generally afflicts the oral mucosa of the patients in the age group of the 20s to 40s. OSMF is more common in South Asian population majorly due to the habit of areca nut chewing. Eventhough many treatments are available for the treatment of this diseases, majority of them are not efficacious and causes serious adverse side effects. Moreover, these treatments mainly focus on palliative care and not the complete cure. It is now well-established that oxidative stress and inflammation play major role in the development of OSMF. Therefore, anti-oxidant and anti-inflammatory agents have significant potential in the prevention and treatment of this disease. A plethora of evidence suggests that spices and their active components have remarkable anti-oxidant and anti-inflammatory properties and can be used for the management of OSMF. For example, Turmeric and its active component curcumin have shown significant anti-oxidant and anti-inflammatory properties and many preclinical and clinical studies proved that these agents are safe and affordable for most of the population worldwide. Besides, these agents are known to scavenge free radicals and modulate the expression of various pro-inflammatory cytokines and inflammatory signaling pathways. Further, several preclinical and clinical studies showcased their role in the management of OSMF. In addition to Turmeric, several other spices are also shown to have anti-OSMF properties. Therefore, the current talk elaborates the potential of spices in the management of OSMF and their mechanism of action.

**Keywords:** OSMF, Spices, Inflammation, Turmeric, curcumin

**Biography**

Dr. Ajaikumar B. Kunnumakkara, is currently working as a Professor in the Department of Biosciences and Bioengineering, Indian Institute of Technology Guwahati, Assam, India (IIT Guwahati). He is also an Honorary Chair Professor in Nanoscience and Nanotechnology and Visiting Scientist at BioMedical Research Institute (AIST), Tsukuba, Japan. He was elected as Fellow of Royal Society of Medicine, United Kingdom in 2008. He earned his doctorate in 2006 from Amala Cancer Research Center, Thrissur, affiliated with University of Calicut, Kerala, India. Dr. Kunnumakkara did his first postdoctoral work at the University of Texas MD Anderson Cancer Center, Houston, Texas, USA (2005–2008) and his second postdoctoral work at the National Cancer Institute of National Institutes of Health (NCI/NIH), Bethesda, Maryland, USA (2008–2010); where he was subsequently employed as a NIH Scientist from 2010 to 2012. Dr. Kunnumakkara's research interests include the role of inflammatory pathways in cancer development, Cancer cell signalling, identification of novel biomarkers for cancer diagnosis and prognosis and cancer drug development. \ He is credited with the publication of more than 280 articles including original research articles, reviews and book chapters. Currently, he has over 38,000 citations and an h-index of >65. Presently, his work is cited over 5000 times in the literature annually. Dr. Kunnumakkara has also edited nine monographs including "Molecular targets and therapeutic uses of spices: Modern uses for ancient medicine"; "Anticancer properties of fruits and vegetables: A scientific review", "Fusion Genes and Cancer" and Cancer Cell Chemoresistance and Chemosensitization. Currently, he is the Executive Secretary of Society for Nutraceuticals and Chronic Diseases and Joint Secretary of Society for Translational Cancer Research. He is the editor of Phytomedicine, Exploration of Targeted Anti-tumor Therapy, Current Research in Pharmacology and Drug Discovery, Journal of Ayurveda and Integrative Medicine etc. He is also the recipient of many awards including the Faculty Award from Kfr El-Sheik University, Egypt for his outstanding contribution in science and best scientific presentation award from National University of Singapore. He has also delivered many Key Note lectures and invited lectures.