Cancer chemoprevention by black tea polyphenols: emerging evidence and molecular targets Professor Dr. S. Nagini, MSc, PhD. Department of Biochemistry and Biotechnology, Faculty of Science, Annnamalai University, Annamalainagar-608 002 India.

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PLENARY LECTURE

Research over the past decade has provided convincing evidence to support the premise that phytochemicals from the diet offer protection against cancer risk. A large number of phytochemicals from the diet have been demonstrated to exhibit anticancer activities by interfering with multiple signaling pathways aberrant in cancer. These agents target a plethora of molecular targets and pathways including xenobiotic-metabolizing enzymes, reactive oxygen species, inflammation, cell cycle, apoptosis, invasion, angiogenesis, transcription factors, and protein kinases. In addition, dietary phytochemicals also synergize with conventional chemotherapy and radiotherapy. Thus naturally derived phytochemicals could play an important role in cancer chemoprevention and therapy owing to multitargeted mechanistic action and lack of substantial toxicity. However, more rationally designed novel clinical trials are required to translate the preclinical findings into tangible clinical benefits.