

FOREWORD

TEA IS AN ANCIENT BEVERAGE, consumed by over two-thirds of the world's population. It is believed that tea consumption is likely to have beneficial effects in reducing cancer of various sites in certain populations. Experimentally, the cancer preventive property of tea has been explored by many investigators with encouraging results. This property is mainly a result of the polyphenolic contents of tea, which comprise catechin derivatives predominantly present as monomeric forms in green tea and as oxidized and polymeric forms in black tea. These polyphenols are endowed with strong antioxidant activity, and their cancer preventive property is attributed to such action. Other mechanisms than the antioxidant activity may, however, operate during tumor cell growth inhibition or apoptosis, the two important phenomena commonly observed with tea polyphenols. While the anticarcinogenic role of green tea polyphenols has been evident from a number of studies, data on black tea are limited. It is interesting to note, however, that black tea is widely consumed in the Indian subcontinent and Western countries and is considered the world's most popular beverage.

The present issue was conceived with the idea of presenting recent evidence on various aspects of the cancer-preventing activity of tea and its polyphenols. Emphasis has been concentrated on the selection of contributions related to black tea and its cancer-modulating activity. During the past few years, vigorous research activity on the biological effect of black tea has been initiated in India, and hence, all the contributions in this issue are from India.

Observations on the antioxidant effect of black tea have been presented in several articles. These include the effect of black tea in the prevention of carcinogen/DNA adduct formation, in protecting thymocytes in tumor-bearing animals, in suppressing carcinogen-induced oxidative stress, and in protecting from arsenic-induced chromosomal damage. One article describes an interesting observation on the induction of apoptosis in tumor cells by tea polyphenols as measured by the comet assay. Each author has presented original observations to depict the beneficial effects of tea, particularly black tea polyphenols, in counteracting the process of carcinogenesis or in inhibiting the growth of tumor cells. I sincerely hope that readers will draw the essence of the message that consumption of tea is certainly beneficial.

I am very thankful to Dr. Edgar Moran, Editor of the *Journal of Environmental Pathology, Toxicology, and Oncology*, for giving me this opportunity to act as a Guest Editor of this special issue on Tea and Cancer Prevention. I thank my colleagues Dr. Madhumita Roy, Ms. Sutapa Chakraborty, Ms. Dona Sinha, and Ms. Trina Kundu for their invaluable help.

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