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Special issue on Molecular Basis for Cancer Prevention with Bioactive Food Components in Nutrition and Cancer – An International Journal

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Introduction

The advance of technology and understanding of the process of cancer development suggests that the reported lesser incidence and death due to cancer in countries other than the Western and European countries might also be due to under- diagnosed and under-represented cases. Further, increases in life span as well as ignorance about the disease puts populations in South and South East Asian countries at higher risk to develop cancer. With the increasing rate of cancer incidence every year in non -Western countries, cancer is estimated to become the deadliest disease in coming decades. Conventional chemo- and radio-therapies during the past three decades have not been able to contain the disease, and also have serious side effects. Many natural agents, especially small molecules from plants are non-toxic, easily available and may have anticancer potential. Thus, screening phytochemicals as anticancer agents could be a better approach in cancer prevention and treatment. This chemoprevention approach may have translational significance for prevention and treatment of cancer.

Therefore to emphasize the potential role of phytochemicals in cancer prevention and therapy, it was our privilege to host the International Symposium on Recent Advances in Cancer Research: Therapeutics to Chemoprevention, at Central University of Gujarat (CUG), Gandhinagar. The conference was co-organized by the University of Colorado Denver, USA; University of Pittsburgh, USA; University of Oklahoma, USA, during 8–9 February, 2012. Modern biological strategies, specifically the latest developments for the targeted prevention and treatment of cancer *via* dietary, natural and synthetic agents were discussed in detail. The symposium also emphasized the translational aspect of cancer chemoprevention strategies for various cancers.

The symposium deliberations include the ideas for combinatorial chemoprevention by phytochemicals as a promising approach for cancer control and emerging trends for the use of herbal radio-modulators to sensitize the cancer cells for apoptotic cell death. Many bioactive phytochemicals such as silibinin, benzyl isothiocyanate, anthocyanidins, nextrutene, tocopherol, etc. were discussed for their *in vivo* efficacy in animal tumor models, associated mechanisms and translational potential. Targeting tumor microenvironment with small

molecules was found promising and having translational potential for prostate and breast cancer chemoprevention.

The novel work and ideas presented at the symposium were helpful in guiding the research orientation of scientists, especially the young researchers who will be benefitted at all levels of their career development. Since chemoprevention of cancer is becoming an attractive approach for controlling cancer, we felt that the deliberations of this symposium should reach to the wider section of the researchers. Therefore, it was planned to bring out a special issue on *Molecular Basis for Cancer Prevention with Bioactive Food Components in Nutrition and Cancer – An International Journal*. We appreciate the researchers for contributing their novel work and ideas to this special issue. We are grateful to the Editor of *Nutrition and Cancer – An International Journal*, for his initiative to bring out this special issue on this relevant topic. We believe that this volume will be enlightening for the researchers working in the area of cancer chemoprevention.

Biographies

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