Journal of Carcinogenesis

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Editorial

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# Carcinogenesis and cancer prevention: the process and the disease deserve a better understanding

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Published: 15 November 2002

*Journal of Carcinogenesis* 2002, **1**:1

Received: 12 November 2002
Accepted: 15 November 2002

This article is available from: http://www.Carcinogenesis.com/content/1/1/1



The last few decades have seen a significant progress in the management of various cancers. In addition to traditional treatments such as radiation, surgery, and chemotherapy, several new approaches based on knowledge of biological processes have been developed and tested and are being constantly refined. It is ironic that while we are making progress in treating cancers, the incidence of cancers is increasing. This discomforting fact suggests that perhaps the best way to fight cancer may be to prevent it from appearing in the first place.

A common question in the minds of scientists and physicians involved in research and treatment of cancer is how do we prevent it? The obvious answer comes from the age old saying that 'you are what you eat and breathe, and that in turn may answer the question of how our ancestors had much lower incidence of cancer.

As we, the scientists, are curious, we ask what are the substances in our food that are vital to maintain normal functioning of the cells in the body? A corollary to this question would be, could we identify those substances and supplement them into food to prevent and or reverse the process of cancer development.

The possibility of reversing cancer depends on the knowledge of the fundamental molecular changes that accompany the process of cancer development. The paradigm that cancer is a result of genetic changes and is, therefore, not amenable to efforts to reverse it, seems to be giving way to a new concept that 'genetic changes are not necessarily permanently etched in cells and the wild type characteristics of the cells could be restored'. Results published in recent papers are encouraging and show a promise for a major paradigm shift [1–8].

Incidence of cancers of the gastrointestinal tract is increasing at an alarming rate. It is important to develop non-invasive methods of detecting precancerous and cancerous lesions. Development of sensitive and specific techniques for early diagnosis will have a far-reaching effect on reducing the incidence of and mortality from GI cancers in at-risk population.

Technological advances in the field of genomics and proteomics are responsible for a major thrust in understanding the complex molecular processes of cancer and for assessing the efficacy of various compounds-natural products and synthetic analogues. Complete sequencing of the human genome and identification of all human genes in near future will have far reaching influence on our understanding of complex processes like cancer and will lead to effective therapies.

In spite of all these advances in the treatment of cancer and knowledge of the processes responsible for the disease, there is a gap in the understanding of molecular events leading to cancer and mechanisms of action by anticancer agents. Generally speaking, the field of carcino-

genesis is far from being completely explored. Many novel ideas and concepts still need to be introduced into the field and the results of several provocative experiments are yet to be disseminated and shared. There is a need and greater scope for multidisciplinary research in the field. A forum for an accelerated publication of results and a free access to such publications is very important to the field. These are the considerations that led to the birth of a new online journal, **Journal of Carcinogenesis.**

I am very happy that several eminent researchers and physicians have agreed to be on the editorial board of this journal. The journal will branch into six sections headed by an editor who is an expert in that field. Steven Shiff will be in charge of organizing the section on diet and environmental carcinogenesis, Nitin Telang will be editor for Chemoprevention section, Yutaka Kohgo will head clinical and Preclinical studies, Hongua Li will edit Genomics and Proteomics, Kiron Das will edit a section on gastrointestinal carcinogenesis and Satya Narayan will be editing a section on DNA damage response and cell signaling.

I hope the new journal will receive your support and suggestions and you will consider it a journal worthy of publishing your exciting results.

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