

## SPECIAL ISSUE ON "CANCER"

THE IDEA of publishing a special issue of Science & Culture on Cancer was suggested by Dr. D. P. Burma, Ex-Professor of Banaras Hindu University, Varanasi. When I was approached by the Editor of Science & Culture to take up this difficult task of editing a special issue on Cancer, I agreed because I was convinced that it is a golden opportunity to educate common people on different aspects of the deadly disease.

One of the most fearsome ailments that human civilization has ever faced is Cancer. The illness we call "cancer" is practically a spectrum of diseases which has extraordinary diverse features in all respects, causation, underlying pathology, clinical symptoms, therapeutic approaches and chances of cure. In reality it is a disease involving a variety of disorders of cell & tissue functions. The statistical survey indicates that around one in three of us will at some time have an unwelcomed diagnosis of cancer. Everyday around 1500 Americans die of this disease and needless to say, vastly more in other countries. Over 8 millions new cancer diagnoses are delivered each year worldwide.

The area is so fast developing that it is impossible to cover the various aspects of cancer in one issue. Naturally attempts have been made to choose certain specific topics to have glimpses of a limited number of emerging areas only. However, attempt has been made in this issue to deal with cancer from biostatistics to molecular aspects as far as possible within the limited scope. The clinical management of cancer coupled with different therapeutic approaches has been one of the obvious choices. The incidence of cancer in India which has reached 180-200/ 100,000 population is alarming and needs immediate attention. Therefore importance of cancer registry in this country has been specially emphasized. The molecular events before and following cancer development are always a major attraction for the basic scientists as

well as the clinicians. Naturally some of those have been part of the presentation of this issue. The new therapeutic approaches are constantly receiving attention to fight the monstrous disease. Thus the development of the anti-cancer drugs is one of the most challenging areas of cancer biology. In fact understanding of the mode of action of the carcinogens helped enormously in designing and identification of anti-cancer drugs. Naturally the history of anti-cancer drug development, chemical as well as synthetic approaches and present status constitute a significant part of this compilation. The management of cancer with natural compounds (macro and micro nutrients) is generally known as cancer chemoprevention. Thus a review of the area has been quite timely. Further the role of cytokines in regulation of anti-tumor responses, as discussed here will throw light not only on the molecular aspects but may initiate new therapeutic approaches. It is well established now that certain types of viruses, for example, human papilloma virus (HPV), are related to the development of human cervical cancer. The discussion on this aspects has naturally found a place in this special issue. During the last two to three decades the advent of molecular biology has helped to understand the disease at the molecular level and the molecular techniques developed through these studies have revolutionized the diagnosis, treatment and management of the disease. The decoding of the human genome and understanding of its functional aspects, coupled with the development of bio-informatics have provided a new tool in the management of cancer. Therefore these aspects have been specially focused in most of the articles compiled in this issue.

I do not know whether the purpose of the special issue of Science & Culture will be fulfilled by conveying the requisite information regarding the different aspects of the perennial threat to the human civilization. But it would be satisfying to me if the information provided here helps

to educate the common people in this area. I hope, this special issue serves the scientists as well as the non-scientists to some extent. It must, however, be admitted that the vastness of the accumulated knowledge has led to undesirable injustice to many other relevant areas. However, I sincerely believe that more and more articles

covering the recent advancement of cancer research and treatment will appear in future issues to update our knowledge in this ever challenging area.

– *Amitava Chatterjee*  
GUEST EDITOR

### **DO YOU KNOW :**

1. Your life is becoming 3 seconds less per puff of smoking.
2. In our country 50% of cancer cases is caused by tobacco habit.
3. Throat, lung, oral, intestinal cancers are due to bad habits of tobacco and tobacco related products
4. Please stop tobacco habit because it is the cause of most deadly form of oral cancer.
5. Your addiction to tobacco causes harm to your family members. Save the money you are spending for your addiction and spend it to give your children a better life.

### **SYMPTOMS OF CANCER :**

1. If you have nagging sore.
2. If blood continue to ooze with stool and urjne.
3. If wart, mole or swelling grows faster.
4. If hoarseness of voice continues with cough and bleeding.
5. If females experience long lasting white discharge or unnatural bleeding specially after menopause.