



## Molecular Mechanisms of Carcinogenic and Antitumor Activity



It is a great honour and pleasure for me to introduce the volume of "Scripta Varia" containing the papers presented to the Working Group on "The Molecular Mechanisms of Carcinogenic and Antitumor Activity", held at the Pontifical Academy of Sciences on 21-25 October 1986. I wish to express the Academy's sincere thanks and appreciation to all the distinguished scientists who have accepted our invitation and devoted part of their valuable time to come to this meeting and to share with us their knowledge, plans, and hopes. I am particularly indebted to my friend Professor Bernard Pullman, a member of this Pontifical Academy, who has brilliantly carried out the cumbersome task of planning, organizing, and presiding over this Working Group.

Needless to say, the problem of cancer is of major concern for humanity. The Pontifical Academy of Sciences has examined it on a number of occasions. The most striking aspect of this Working Group is the level at which this problem is treated, resulting in an unprecedented overview of its numerous and diversified facets. The presentations and discussions covered the most fundamental molecular aspects of the mechanism of action of the drugs involved, the physical chemistry of their intracellular inter-actions, and also their biological and medical effects. They combined the study of both the carcinogenic and antitumor agents which share the common main target DNA, and sometimes the same site on this target. The participants concentrated significantly on the recent discoveries related to oncogenes and technical advances, in the attempt to control gene expression by means of appropriate chemicals.

Although, as in other scientific fields, many discoveries in the fields of carcinogenesis or cancer chemotherapy have occurred by haphazard experimentation, today the time appears ripe for new progress based on the detailed understanding of the mechanisms involved in nucleic acid

reactions and gene functioning. This rational approach may provide a source of more economical and more rapid beneficial developments. It is my profound hope and wish that the Proceedings of this remark-able meeting will contribute to these developments. (C. Chagas, Scripta Varia 70)