

Medical, Biochemical and Chemical Aspects
of Free Radicals



MEDICAL, BIOCHEMICAL AND CHEMICAL ASPECTS OF FREE RADICALS

Proceedings of the 4th Biennial General Meeting of The Society for Free Radical
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Volume 1

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PREFACE

These two volumes contain the record of the International Conference on Medical, Biochemical, and Chemical Aspects of Free Radicals which was held from April 9th to 13th, 1988, in Kyoto as the Fourth General Meeting of the Society for Free Radical Research.

There is an increasing number of observations and reports which suggest that free radicals play an important and crucial role in biological systems. Free radicals are now generally accepted as being involved in a variety of pathological states, such as inflammation, platelet aggregation, asthma, rheumatoid arthritis, and muscular dystrophy. Furthermore, free radicals have been implicated in other disorders, including dementia, tissue damage during reperfusion following stroke and heart attack, toxic effects of anti-cancer drugs, cancer, and other diseases whose causes have not yet been determined.

Even when stored in a refrigerator, many foods eventually become rancid, but why don't we get rancid? Of course, we have an array of defense systems that protect us against these radical attacks. To understand these defense mechanisms and systems is one of the important subjects and concerns of this Conference.

Extensive studies are now being carried out all over the world by many scientists in many fields, but many subjects still remain controversial. There is a big gulf that exists between scientists working of fundamental science and those working on practical and clinical problems. Chemists are apt to think that life can be understood in a rational way if expressed in the language of chemistry, that is, in terms of molecules and reaction mechanisms, although they often find biological systems too complex to deal with. Clinicians, on the other hand, agree that fundamental research is important but believe that biological systems can never be dealt with by the chemists.

We should be aware that we are all now in quite an important stage in the history of free radical research related to biology and medicine. We hope this Conference will provide an opportunity for scientists working in different areas to discuss ways and means of carrying out an interdisciplinary attack on the many problems that still remain in free radical research.

We wish to take this opportunity to express our thanks to the members of the Organizing Committee and the International Advisory Committee for their valuable comments and assistance.

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