

Preface

Reactive nitrogen and oxygen radicals have been known for long to play an important role in immune defence mechanisms. Over last few decades, evidence has also been accumulating for a central role for these radicals in normal cellular functions. The 1998 Nobel Prize in Physiology and Medicine was awarded to Robert F Furchgott, Louis J Ignarro and Ferid Murad for identification of Nitric Oxide as a crucial signalling molecule in biological systems. The focus of this special issue of *Journal of Biosciences* is on our current understanding of the pathophysiological and molecular mechanisms of disease development. Dissemination of new advances in this emerging important discipline will enhance interaction and exchange of information between scientists and further their common goal of disease prevention and amelioration.

The idea of putting this issue together took shape during the Third International Conference on Oxygen/Nitrogen Radicals: Cell Injury and Disease, held in Morgantown, West Virginia, USA from 1–5 June 2002. At this conference several diseases including Alzheimer's, atherosclerosis, arthritis, diabetes, Parkinson's disease, as well as disorders of the eye, heart, skin, and lungs were discussed. The conference also had special sessions on molecular mechanisms involved in disease development, the value of dietary supplementation with antioxidants in the prevention of cellular damage leading to chronic disease, therapeutic modulations of disease, special *in vivo* techniques and the role of molecular studies in human risk assessment. It provided a forum for over 240 experts, representing 21 countries and numerous state and federal regulatory agencies, to discuss and synthesize this information. A general consensus amongst the participants was that it would be useful to publish selected presentations, thereby providing a wider dissemination of the information presented during the conference. Two special journal issues were planned for this purpose. The first special issue was that of *Molecular and Cellular Biochemistry* (volumes 234/235, May/June 2002). The second one is the current issue of *Journal of Biosciences*. Both these special issues are intended to provide the general scientific community with citable information concerning the broad range of information on the different aspects of the role of oxygen and nitrogen radicals in cell injury and disease as discussed during the conference.

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