

विवेक भसीन  
Vivek Bhasin



निदेशक, भाभा परमाणु अनुसंधान केंद्र  
Director, Bhabha Atomic Research Centre  
सदस्य, परमाणु ऊर्जा आयोग  
Member, Atomic Energy Commission



## FOREWORD

Dr. Homi Jehangir Bhabha, the father of the Indian nuclear programme, recognised the importance of Bioscience research in Indian Atomic Energy programme. He articulated in his concluding presidential address at the International Conference on Peaceful Uses of Atomic Energy, 20<sup>th</sup> August, 1955 that “...the discussion of the genetic effects of radiation clearly showed that we have not enough knowledge on which to base definite conclusions, and that a concerted and massive research effort on this problem is required, before we can be quite sure that no suffering will be caused to future generations through the production of deleterious mutations.” That Dr. Bhabha chose Dr. Gopal-Ayengar, a world-renowned biologist, as one of the founders of the Atomic Energy Establishment at Trombay establishes the perceived importance of Bioscience research in the departmental activities.

Understanding the cytological effects of radiation and radiomimetic substances in biological systems was a major area of research in the initial years. The Bioscience research programs quickly expanded in to the areas of nuclear agriculture, food irradiation, molecular biology, cancer biology and protein crystallography. In addition to providing an understanding of the basic cellular processes, these programmes have contributed to the release of improved crop varieties, development of irradiation-based preservation protocols for food grains and fruits and development of radioprotectors. A significant contribution to the societal benefits of these spin-off technologies derived from nuclear science is a demonstration of the multidisciplinary nature of the department.

I am delighted to know that the Bioscience Group is commemorating 75 years of R&D activities this year. I am pleased to note that as a part of these celebrations, this book entitled “75 years of Bioscience Research in Indian Atomic Energy Programme” is being published. The topics detailed in this book chronicle the gamut of developments that took place in the area of biological research over more than seven decades, attempting to highlight the significant societal implications of the atomic energy programs. I am glad that the chapters provide a historical perspective to the evolution of some of the important R&D activities and at the same time carry a treasure of information relevant for future endeavors.

I compliment all the contributing authors and the editors for their diligent efforts in bringing out this compilation and wish everyone an enriching experience from this book.

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