

डॉ. अजित कुमार मोहान्ती
Dr. Ajit Kumar Mohanty



भारत सरकार
Government of India

अध्यक्ष, परमाणु ऊर्जा आयोग
व
सचिव, परमाणु ऊर्जा विभाग
Chairman, Atomic Energy Commission
&
Secretary, Department of Atomic Energy

FOREWORD

Dr. Homi Bhabha in his presidential address in the 1st international conference on peaceful uses of atomic energy in Geneva in 1955 stated that **"For continuation of our civilisation and its further development, atomic energy is not merely an aid, it is an absolute necessity"**.

In harmony with Dr. Bhabha's dream for **"Peaceful uses of Ionizing Radiations and Radionuclides"**, the achievements of Department of Atomic Energy in the field of biological research which began in 1948 are indeed praiseworthy and make us proud. The cutting edge multidisciplinary biological research being carried out in DAE has been consistently making its presence felt in international scientific community including UNSCEAR reports related to health effects of high-level natural radiation on human population residing in Kerala, India. In addition to the excellent basic research towards understanding the effect of radiation on human health, DAE has developed and deployed a spectrum of spin-off technologies. The radiation based technologies have shown tremendous societal impact and applications in the fields like food security, diagnosis and therapy of cancer and development of advanced seed varieties. Indeed, International Atomic Energy Agency has recognized the contributions made by DAE with Outstanding Achievements Award to mutation breeding team and Young Scientist Award.

The various chapters in this book showcase all the significant achievements of biological research being carried out in DAE over the last few decades. The chapters embody the indigenous research carried out by our scientists in both basic and applied Biological research. The indigenous technologies developed as a result of basic research in DAE augur well with the **"Azadi Ka Amrit Mahotsav"** initiative of the Government of India to celebrate and commemorate 75 years of independence and the glorious achievements of its people.

I must compliment the authors of this book for this truly insightful collection of biological research and achievements of DAE in this field. I am sure that the readers will enjoy the diversity and richness of biological research in DAE as they peruse through this book.

Ajit Kumar Mohanty
(Ajit Kumar Mohanty)



अणुशक्तिभवन, छत्रपति शिवाजी महाराज मार्ग, मुंबई - 400 001, भारत • Anushakti Bhavan, Chhatrapati Shivaji Maharaj Marg, Mumbai - 400 001, India
दूरभाष/Phone: +(91) (22) 2202 2543 • फेक्स/Fax: +(91) (22) 2204 8476 / 2284 3888
ई-मेल/E-mail: chairman@dae.gov.in