

Dilip Kumar Maiti and Bubun Banerjee (Eds.)

Bioactive Three-Membered Heterocycles

Green Bioactive Heterocycles

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Edited by
Bubun Banerjee

Volume 6

Bioactive Three- Membered Heterocycles

Natural Products, Green Synthesis and Bioactivity

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Dilip Kumar Maiti and Bubun Banerjee

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DEDICATED
in memory of



Professor (Mrs.) Asima Chatterjee (Mukherjee)
(23.09.1917 – 22.11.2006)

Professor Asima Chatterjee was an outstanding scientist, academician and scientific policy maker of India. She is internationally renowned for her contributions to her research and teaching in Organic Chemistry and associated disciplines. Google-doodle honoured her in 2017 on the occasion of her Birth Centenary, with a comprehensive write-up on the Internet.

Ms. Asima Mukherjee was born in Kolkata (the then called Calcutta) on September 23, 1917. Graduating from Scottish Church College, Kolkata, Asima Mukherjee did her Masters degree in Organic Chemistry as a major followed by doctoral work under the supervision of Dr. Prafulla Kumar Bose on 'Naturally Occurring Indole Alkaloids and Coumarins' at the University of Calcutta. She was awarded the D. Sc. degree in 1944 - the first woman to be conferred Doctor of Science by an Indian University. She carried out post-doctoral research (1947-1950) at University of Wisconsin, USA, at California Institute of Technology, USA then at the University of Zürich, Switzerland.

In 1945, she married Dr. Baradananda Chatterjee, an eminent Physical Chemist who was an authority on Soil Science and Corrosion.

She was the Founder-Head of the Department of Chemistry, Lady Brabourne College in 1940; was appointed Honorary Lecturer, Department of Chemistry (Calcutta University) in 1944; then appointed Reader in the Department of Chemistry (Calcutta University) in 1954. She was bestowed the prestigious Khaira Professorship in Chemistry in 1962 and she graced the coveted chair for twenty years. She established the UGC aided Centre of Advanced Studies on Natural Products at the Department. She continued her research and academic activities till her demise on November 22, 2006.

She was the Founder of a multi-disciplinary Research Institute on Ayurvedic Sciences in 1998, situated at Bidhannagar, Kolkata. This is now named the Central Ayurveda Research Institute, under the Ministry of Ayush, Government of India.

The research activities of Professor (Mrs.) Chatterjee spanned over sixty years. Her major interest was on the Chemistry of Natural Products from Indian Medicinal Plants. She made significant contributions in diverse areas of Natural Products from

Indian medicinal plants, particularly in the fields of indole, isoquinoline and steroidal alkaloids, terpenoids, and polyphenolics. She also made significant contributions on structural, synthetic and mechanistic Organic Chemistry. Besides her interest on fundamental research, Professor Chatterjee always stressed on the utilisation of phytochemicals from indigenous plants as drugs and drug intermediates. She devoted considerable attention to the development of drugs based on the practice of Indian Traditional Medicine. She developed two Ayurvedic combination drugs for CCRAS, Ministry of Health and Family Welfare - a successful rehabilitation drug in the treatment of epilepsy and behavioural epileptic disorder, and a potent antimalarial drug which was later used as an adjunct to standard care in mild to moderate COVID-19. These are landmarks in the use of herbal medicine, without any side effects.

She published 355 research papers, and 20 reviews and book chapters.

Professor Asima Chatterjee created a school of Research on Natural Products. A large number of students obtained their Ph.D. (59) and D.Sc. (3) degrees under her guidance. She was the Chief Editor of the six-volume series, *The Treatise of Indian Medicinal Plants* published by CSIR, India. She also edited and revised a six-volume compilation on *Bharatiya Bonousudhi* (Indian Medicinal Plants) published by the University of Calcutta.

Among the many awards and recognition she received, particular mention may be made of the following – Elected Fellow of the National Institute of Science of India (now known as the Indian National Science Academy) in 1960, and subsequently admitted as a Fellow to all the major Academies of India; Shantiswarup Bhatnagar Award (1961, CSIR); elected General President of Indian Science Congress Association (ISCA, 62nd Session, 1975) – the first woman scientist to receive this unique honour; honoured with the title 'Padma Bhushan' by the Government of India (1975); awarded the C.V. Raman Award (1982, UGC); awarded the Asutosh Mookerjee Award - the highest award of ISCA in 1989; awarded the Silver Jubilee Award of the Central Council for Research in Ayurveda and Siddha, Government of India in 1995; obtained the 'Honoured Citizen of Kolkata' Award by Mayor of Kolkata, in 2006. She was nominated by the President of India to be a Member of the Rajya Sabha (February 1982 – April 1984; May 1984 – May 1990) as a scientist-academician. She contributed to science policy formulations during her tenure at the Rajya Sabha. She was also deeply involved in the Popularisation of Science through the Bangiya Bijnan Parishad.