

Prof. P. K. Bose Memorial Award Lecture
57th Annual Convention of Chemists (ACC) - Indian Chemical Society (ICS)
Recent Trends in Chemical Sciences (RTCS 2020)

Coherency of Recent Trends in Organic and Medicinal Chemistry

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Abstract:

While the pharma sector had been deliberating for long on the requirements of knowledge base and experimental skill that a medicinal chemist should possess it is well accepted that organic synthesis remains at the core of the activities of drug discovery program.¹ Thus, any advancement in the area of organic synthesis is expected to enrich the synthetic tool box of medicinal chemists. In recent times sustainability has been the yardstick of the modern developments of organic chemistry resulting enrichment of the synthetic tool box of medicinal chemistry² in compliance with green chemistry principles.³ However, while the modern development of organic chemistry should obviously expand the medicinal chemistry synthetic tool box⁴ these newly developed synthetic methodologies are rarely observed in the discovery medicinal chemistry.⁵ This results in over dependent on the existing structural framework narrowing the chemical space and hence the scope of IP (Intellectual Property). Thus, a coherent approach encompassing the recent trends in organic and medicinal chemistry is advocated for sustainability in drug discovery research.⁶ The present discussion would address the integration of sustainable development of organic chemistry⁷ with drug discovery for generation of new therapeutic leads⁸ and optimization.⁹

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Professor Chakraborti received Ph. D. degree in Synthetic Organic Chemistry from IACS, Kolkata in 1985 and post-doctoral research training in USA: department of Chemistry, Clemson University (1985-1987) and Medicinal Chemistry, Purdue University (1987-1989). He served Burdwan University (WB) as lecturer of Chemistry (1990-1994) and NIPER-Mohali, Punjab as Assistant Professor (1994-1999), Associate Professor (1999-2001), and Professor (2001-2019) of Medicinal Chemistry.

He has guided 40 Ph. D. and 130 Masters' students, published 180 research papers (> 10,000 citation, h index 61), filed 42 patents. He received University Gold Medal, Bardhaman Sammilani Gold Medal, ISMAS Eminent Mass-spectroscopist award, Ranbaxy Research Award (Pharmaceutical Sciences), CRSI Bronze Medal, R V Patel PharmInnova Best Research Guide Awards for "Innovative Ph. D. Thesis" (2017-2018 & 2016-2017) and "Innovative MS Thesis" (2015-2016 & 2014-2015) in "Pharmaceutical Chemistry." He is Fellow of Royal Society of Chemistry, Indian Academy of Sciences, Bangalore and Indian National Science Academy, New Delhi.