Preface

Investigations embodied in this dissertation entitled “Design and Development of Estrogen-Receptor Based Anticancer Therapeutics” were carried out jointly at Department of Organic Chemistry, Indian Association for the Cultivation of Science and University College of Science & Technology, Kolkata, under the supervision of Dr. Susanta Sekhar Adhikari.

In chapter 1, the general background, we have briefly discussed about the mechanistic aspects of cancer i.e. the role of estrogen and estrogen receptors in cancer pathology.

In chapter 2, a new class of highly potent, ER-selective, anti-breast cancer oxindole conjugated bis-phenols have been developed.

In chapter 3, a unique fluorescent probe, bis-arylidineoxindole-conjugated betulinic acid, has been developed for selective cancer cell detection and killing.

In chapter 4, a folic acid receptor targeted antineoplastics, bis-arylidineoxindole-folic acid conjugate, has been developed. Biological evaluation is underway to expand our knowledge in optimizing the pharmacophore with improved potential.

In keeping with the general practice of reporting scientific observations, due acknowledgements have been made to the findings of other investigators. The responsibility of any unintentional oversight is solely mine.

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(ABHISHEK PAL)