

## PREFACE

Prostate cancer is the second leading cause of death in men. Charles Huggins first found that metastatic prostate cancer responds to androgen-ablation therapy, which heralded the beginning of a new era of prostate cancer therapy. Later, Andrew Schally and others showed that advanced prostate cancer responded to the LHRH agonist as decreased serum testosterone level to 25% and marked reduction in cancer-associated bone pain. The discovery of androgen receptor (AR) led to the screening of chemical libraries for AR blockers. Since then, antiandrogens, including flutamide and casodex, have been in continual use as therapeutic agents. Yet, with either androgen ablation via surgical or medical castration, with or without additional combination of various antiandrogens, eventually most of, if not all, prostate cancers still progress into the Hormone Refractory stage and the detailed reasons for this remain unclear. Cloning of the AR, generation of AR antibodies, finding of AR coregulators and their applications to prostate cancer progression reveals the essential roles of AR in the prostate cancer progression and opened a new approach for AR ablation therapy by targeting the AR, instead of androgens, to battle the prostate cancer.

Chapters 1 to 6 discuss current effective hormonal therapy, immunotherapy, chemotherapy, radiation therapy, and gene therapy, as well as androgen ablation therapy. Chapters 7 to 15 discuss the recent advances in the field of study of the basic mechanisms behind the growth of prostate cancer and how some of these mechanisms can be used to treat prostate cancer. Chapters 16 and 17 include recent research in the study of prostate cancer in newly developed mouse model systems. Many of these studies have distinct potential advantages as they lead toward advances in the clinical treatments of and drug therapies for these androgen-related diseases. We feel our book should be of interest as both

a study guide and research reference for students, basic scientists, and clinicians.

I would like to dedicate this book to my PhD advisor Dr. Liao, whose research philosophy and Taiwanese dignity deeply influences my continued academic career. I would also like to thank Drs. Carbone, Wilding, Messing, Lardy, and Gorski for their help in establishing my independent academic research career at the University of Wisconsin and the University of Rochester. Finally, I thank my copyeditors, Mrs. Karen Wolf and Dr. Loretta Collins, for their invaluable editorial and proofreading assistance.

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