—Instrumentation, accuracy, and quality control issues in development of quantitative fluorescence-image analysis (QFIA).

Part III. Cytogenetic Markers.
—Cytogenetics as a diagnostic aid for childhood hematologic disorders: conventional cytogenetic techniques, fluorescence *in situ* hybridization, and comparative genomic hybridization.
—Preparation of metaphase chromosomes for cytogenetic analysis.
—Chromosome staining and banding techniques.
—Fluorescence *in situ* hybridization to chromosomes.
—Detection of rearrangements in the *bcl*-2 gene using the polymerase chain reaction.

Part IV. Molecular Markers.
—Applications of tissue microdissection in molecular pathology: principles and guidelines.
—*EWS* gene fusions as diagnostic markers in sarcomas: principles and guidelines.
—p53 Detection in breast cancer.
—Use of the polymerase chain reaction technique to detect the t(14;18) translocation in lymphoid tissue.
—Detection of *ras* gene mutations using oligonucleotide ligation technology.
—Detection of prostate-cancer cells in blood and bone marrow by RT-PCR.
—Quantitative, competitive RT-PCR analysis of biomarkers in the study of neoplasia.
—Different display to define molecular markers and genes that mediate malignancy.

Part V. Miscellaneous Markers and Early Detection of Cancer.
—Transforming growth factor beta: a plasma tumor marker.
—Anti-HMdU autoantibodies in human sera as a biomarker of cancer risk.
—A scientific basis for cancer prevention: defining the role of individual cytosolic GST isozyme.
—Aberrant crypt foci system to study cancer preventative agents in the colon: principles and guidelines.

This book would be useful for general clinicians, oncologists, and biologists, as well as for advanced students.

PII: S0960-0760(98)00108-3

CANCER THERAPEUTICS. Experimental and Clinical Agents. Edited by Beverly A. Teicher. Humana Press, Totowa, 1997, 464 pp. ISBN: 0-89603-460-7, US$125.50.

This book, written by leading researchers in the field, covers nearly a century of focused effort by scientists and physicians to develop pharmacologic means to cure the many diseases called cancer, and is a comprehensive review of existing and potential anticancer drugs and therapies. At a critical time in the development of novel cancer treatments, the authoritative contributors shed light on the current status of the major molecules of cancer treatment, and provide cancer researchers and physicians with essential insight into accomplishments and advances in the experimental therapy of cancer. There are two parts containing a total of 19 chapters as follows:

Part I. *Cytotoxic agents: old and new.*
—Nitrogen mustards.
—Phosphoramide and oxazaphosphorine mustards.
—Development of the nitrosoureas.
—Platinum complexes: Anthracyclines.
—Topoisomerase I inhibitors.
—DNA topoisomerase II inhibitors.
—The taxoids.
—Sequence-selective groove binders.
—Bis-naphthalimides: Synthesis and preclinical evaluation.

Part II. *Newer strategies and targets.*
—The enediynes.
—Matrix metalloproteinase inhibitors.
—Interferons and other cytokines.
—Discovery of TNP-470 and other angiogenesis inhibitors.

—Antisense oligoneucleotides.
—Growth factors and growth factor inhibitors.
—Immunoconjugates.
—A case for *ras* targeted agents as antineoplastics.
—Gene therapy.

This book will be of interest to oncologists, clinicians, molecular biologists, physiologists, and advanced students.

PII: S0960-0760(98)00109-5

HORMONES AND GROWTH FACTORS IN DEVELOPMENT AND NEOPLASIA. Edited by Robert B. Dickson and David S. Salomon. Wiley-Liss Inc., New York, 1998, 461 pp. ISBN: 0-471-16899-8, £80.95.

The study of hormones is critical to our understanding of developmental aberrations leading to cancer, and the discovery of polypeptide growth factors has led to profound insights into the duality of control of development and cancer by hormones at the tissue and cellular levels. In this book; leading researchers in the field present a cohesive overview of several important growth factor systems and how they interact with endocrine hormones in the context of tissue-tissue interactions; control of cellular growth, differentiation, and death; and reciprocal control of receptors and ligands at the molecular level.

The first two sections introduce important growth factors and hormonal systems in invertebrate and amphibian model systems, highlights early evolutionary and developmental functions for the classes of molecules later shown to be important in human cancer, establish the roles of growth factors and hormones in mammalian development, and focus on early embryonic events and later events leading to sexual dimorphism. The third section discusses in detail the control of postnatal developmental processes in male and female reproductive tracts, focusing on the prostate and mammary glands, as well as the female reproductive tract, all of which are of special importance in hormonally driven cancers. Finally, the book takes a direct look at cancers and the molecular mechanisms of hormone-growth factor interactions. The 23 chapters in this timely volume are divided into four parts as follows:

Part I: *Growth factors and steroid hormones in the development of invertebrates and amphibians.*
—Pattern formation by sequential signaling during *C. elegans* vulval induction.
—EGF-receptor and TGF-β-like Dpp signaling during *Drosophila* development.
—Ecdysone response in *Drosophila*.
—Estrogen control of *Xenopus Laevis* egg yolk mRNA synthesis and degradation.

Part II: *Growth factors and hormones in mammalian development.*
—Growth factors in the mammalian pre- and postimplantation embryos.
—Transcriptional regulation in an *in vitro* model system for mammalian embryogenesis.
—Cellular interactions mediated by tyrosine kinase receptors during development: driving forces for growth, motility, and differentiation.
—Developmental and physiologic roles of ErbB receptors and their ligands in mammals.
—The estrogen receptor in mammalian development.
—Progesterone and development.

Part III. *Postnatal development processes in the adult: reproductive tracts and mammary glands.*
—Prolactin in development of the mammary gland and reproductive tract.
—Growth factors as mediators of stromal-epithelial interactions in steroid hormone target organs.
—Hormones, insulin-like growth factors, and their binding proteins in the female reproductive tract.
—Signal networks in the mammary gland: lessons from animal models.

Part IV: *Growth factor-hormonal interactions in tumorigenesis and malignant progression.*
—Sex steroids and cancer.
—The IGF-I receptor in normal and abnormal growth.
—Mutational activation of receptor tyrosine kinases.