

BOOK REVIEWS

Bioarrays. From Basics to Diagnostics. Krishnarao Apasani (Ed). Humana Press, Totowa, New Jersey, USA, 2007, 270 pp, 56 illus., ISBN 978-1-58829-476-0

This book provides an integrated and comprehensive collection of timely articles on the use of bioarray techniques in the fields of biotechnology and molecular medicine.

The entire volume is broken into four sections that create one well-integrated work: Bioarray Technology Platforms, Biomarkers and Clinical Genomics, Biomarker Identification Using Clinical Proteomics and Glycomics, and Emerging Technologies in Diagnostics.

Particular emphasis is placed on DNA, protein, and carbohydrate biochips. The volume also looks extensively at oligonucleotides, cDNA, proteins, antibodies, and carbohydrate arrays.

This book serves as an indispensable reference for graduate students, post-docs, and professors as well as an explanatory analysis for executives and scientists in biotechnology and pharmaceutical companies.

In vivo imaging of cancer therapy. Anthony F. Shields, Pat Price (Eds). Humana Press, Totowa, New Jersey, USA, 2007, 326 pp, ISBN: 978-1-58829-633-7

A variety of cutting-edge imaging techniques, including their use for best practice, are addressed in this book. The book also provides examples of results found in both pre-clinical and clinical studies.

This comprehensive text covers the entire spectrum of *in vivo* imaging for oncology, including current approaches to detailed anatomic measurements, MR and optical spectroscopy, and molecular imaging techniques requiring exogenously administered imaging agents.

The challenges and approaches to quantification are also outlined. The authors describe technologies and methods that are currently clinically available, and many that are still in a developmental stage or useful only in animal studies.

However, it is important to realize that the majority of imaging devices now offered for sale by the major imaging equipment manufacturers did not exist as recently as three or four years ago. Thus the pace of technology development is such that techniques described here as laboratory or investigational will likely be in clinical use within a few years.

This book will aide clinicians at all levels in keeping up with the most cutting-edge techniques.

Intraperitoneal cancer therapy. C. William Helm, Robert P. Edwards (Eds). Humana Press, Totowa, New Jersey, USA, 2007, 191 pp, 35 illus, ISBN 978-1-58829-878-2

This book investigates intraperitoneal chemotherapy in a variety of complex and interesting ways. The volume details major clinical trails to date, including immunotherapy, hyperthermic treatment of colo-rectal and ovarian cancers. Authors also examine regional approaches to therapy, systemic therapy, and the use of carboplatin and paclitaxel as the standard treatment for women with stages III and IV ovarian cancer.

Other chapters also investigate techniques and procedures in treatment, as well as the future direction of both normothermic and hyperthermic intraperitoneal chemotherapy.

Microtubule protocols. Jun Zhou (Ed). Humana Press, Totowa, New Jersey, USA, 2007, 305 pp, 58 illus, ISBN 978-1-58829-642-9

Microtubules are essential components of the cytoskeleton, and play critical roles in a variety of cell processes, including cell shaping, intracellular tracking, cell division, and cell migration. Microtubule Protocols presents a comprehensive collection of essential and up-to-date methods for studying both the biology of microtubules and the mechanisms of action of microtubule-interacting drugs. The straightforward presentation of readily reproducible protocols is a hallmark of the Methods in Molecular Medicine™ series, and is evident in this volume. Methods presented range from the purification and characterization of microtubule proteins, analysis of post-translational modifications of tubulin, and determination of microtubule structure, to the visualization of microtubule and spindle behavior, measurement of microtubule dynamics, and examination of microtubule-mediated cellular processes. Both basic scientists and clinical researchers will benefit from this collection of state-of-the-art protocols for microtubule research.

Monoclonal antibodies. Methods and protocols. Maher Albitar (Ed). Humana Press, Totowa, New Jersey, USA, 2007, 228 pp, 75 illus, ISBN: 978-1-58829-567-5

This book examines a collection of state-of-the-art methods that employ monoclonal antibodies in a clinical setting. The opening chapters focus on the

gold standard method for generating mouse monoclonal antibodies through hybridoma technology, future methods for engineering recombinant and humanized antibodies, methods for engineering soluble Fc fusion protein, and the use of antibodies and flow cytometry in the quantification of cell signaling proteins.

Specific chapters describe how antibodies are used for the diagnosis and classification of hematologic diseases. Subsequent chapters examine the advantages and most recent advances of using bead-based immunoassays. This includes the ability of bead-based technology to multiplex and analyze several analytes simultaneously, and the use of beads in detecting fusion proteins resulting from chromosomal translocations. Concluding chapters provide additional examples of methodologies that employ monoclonal antibodies.

The book provides descriptions of methods that cover a wide spectrum of applications in the field of monoclonal antibodies. This field will continue to expand and provide new and innovative techniques, not only in the laboratory, but also as a basis that complements targeted therapy.

Molecular pathology of gynecologic cancer. Antonio Giordano, Alessandro Bovicelli, Robert J Kurman (Eds). Humana Press, Totowa, New Jersey, USA, 2007, XIV, 226 pp, 41 illus, ISBN: 978-1-58829-453-1

Molecular pathology of gynecologic cancer focuses on putting successful molecular strategies into practice for the treatment of gynecologic cancer. The volume begins with an explication of the editors' hypothesis that cancer is mainly a disease of the cell cycle, based on the deregulation of the physiological process of cell reproduction. The following eleven chapters focus on specific issues in gynecologic cancers, including: a proposed model of ovarian serous carcinogenesis, molecular markers for ovarian epithelial cancer, an overview of the pathology of endometrial cancer, molecular genetic aspects of endometrial carcinoma and cervical cancer, a natural history of Human Papilloma Virus (HPV) as it relates to cervical cancer, and hereditary issues in gynecologic cancers. The concluding chapter proposes and outlines a holistic approach to the treatment of female cancer patients. This new volume in Humana's Current Clinical Oncology™ series will be necessary reading for clinicians and experimental researchers alike.