

FOREWORD

Despite remarkable advances in our understanding of the biology of breast cancer and better therapeutic options available in the last decades, this malignant neoplasia continues to be of major public health concern around the globe. In 2020, 2.3 million females were diagnosed with breast cancer worldwide, with an incidence and related mortality that continue to grow globally. However, trends and patterns vary in different countries as a result of differences in risk factors, screening strategies, and access to newer therapies, among others. In the last decades, many immunohistochemical markers (e.g., ER, PR, HER2, proliferation marker Ki-67), genomic markers (e.g., *BRCA1*, *BRCA2*), and immunologic markers (e.g., immune checkpoint proteins such as PD-L1, and tumor-infiltrating lymphocytes) have been identified as molecular hallmarks of breast cancer, which are currently used to stratify patients more accurately and provide them with a range of treatment options, including novel targeted therapies.

In this book, a wide spectrum of topics that comprise clinically and biologically relevant aspects of breast cancer is covered. The first chapters provide an up-to-date overview of epidemiological and etiological aspects of the disease, and a concise pathologic description of the molecular subtypes of breast cancer. Innovations and specialized techniques in surgery, which plays a primary role in the treatment of breast cancer, are then outlined, as well as non-invasive methods used to assess lymphedema, a side effect seen in some patients after surgical or radiation treatment. Since therapies currently used to treat metastatic breast cancer can extend survival and quality of life of patients but are not curative, a better understanding of the mechanisms involved in metastatic dissemination is of pivotal importance; here, the role played by platelets and galectins in that process is described. In the search of novel potential therapeutic targets in breast cancer, different molecules, processes, and approaches are being explored at the bench. In this regard, different chapters of the book describe novel research in a ubiquitin-specific protease (ubiquitin-specific peptidase 18), the ribosomal protein S6 kinase 1 (RPS6K1), the lysosomal system, as well as the use of specific nanoparticles and proteolysis-target chimeras as potential therapeutic agents for breast cancer.

The editor of *Breast Cancer* has brought together contributors across a full range of clinical and translational research to produce a book that gives the reader an overview of several important aspects of breast cancer that may be of interest to healthcare professionals interested in this important medical topic.

R. Daniel Bonfil, PhD
Professor of Pathology
Department of Medical Education
Dr. Kiran C. Patel College of Allopathic Medicine
Fort Lauderdale, FL, USA
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