

PREFACE

It has been almost ten years since the concept for producing the first edition of *Molecular Diagnostics: For the Clinical Laboratorian* was conceived. In those ten years the field of molecular pathology and diagnostics has exploded as many predicted. The clinical diagnostic laboratory continues to function as the playing field for this expansion that includes vast and dynamic changes in test menus, instrumentation, and clinical applications. The impact of this field on the routine practice of clinical medicine and management of patients continues to be felt as new developments that span all areas of laboratory medicine exceed our expectations.

The success of this technology in a clinical setting is highly dependent upon the training of well-qualified technologists, residents, and clinicians alike, who will not only have to perform and interpret results of these tests but also understand the limitations of the technology and resulting clinical implications. The production of this second edition is a testament to our passion and commitment for the teaching and training of qualified individuals who wish to embark on this journey. The numerous training programs, educational venues, and board certification examinations that have evolved over the past ten years also sends a strong vow of commitment by others in the field to ensure the successful use of these new tools in supporting the best possible patient care that is available.

The second edition of *Molecular Diagnostics: For the Clinical Laboratorian* begins with a historical perspective of laboratory medicine followed by an overview of basic molecular biology techniques and concepts. Part III provides a more in depth examination of some advanced molecular technologies and their potential uses. Part IV describes other technologies found in the clinical laboratory that can complement or be complemented by molecular diagnostic technologies. The increasing need for awareness and practice of quality assurance in this field led us to include a complete section (Part V) that examines some of these issues. Although the first edition included clinical applications all in one section, the increased number of applications led us to develop separate sections for genetic disease, human cancers, infectious diseases, and identity testing (Parts VI–IX). Finally, the book concludes with a section on genetic counseling and ethical/social issues involved with nucleic acid testing.

Although no such book could possibly be all encompassing in such a rapidly developing field, we feel that the material covered herein will provide the reader with an excellent overview.

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<http://www.springer.com/978-1-58829-356-5>

Molecular Diagnostics

For the Clinical Laboratorian

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2005, XVIII, 567 p., Hardcover

ISBN: 978-1-58829-356-5

A product of Humana Press