

Preface

The polymerase chain reaction (PCR) is a technique so commonplace in the modern day laboratory that it is easy to forget its revolutionary impact. Real-time PCR has removed many of the limitations of standard end-point PCR and since its introduction in the mid-1990s there has been an explosion both in the number of publications and available instrumentation describing real-time PCR applications across many disciplines.

This book aims to provide both the novice and experienced user with an invaluable point of reference to the technology, instrumentation and its wide range of applications. The initial chapters cover the important aspects of real-time PCR, from choosing an instrument and probe system to set-up, controls and validation. It then goes on to give a comprehensive overview of important real-time applications such as quantitation, expression analysis and mutation detection. This is complemented by the final chapters which address the diagnosis of infectious diseases. This essential manual should serve both as a basic introduction to real-time PCR and a source of current trends and applications for those already familiar with the technology. We also hope this text will stimulate readers of all levels to develop their own innovative approaches to real-time PCR.

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