Preface

The Methods in Molecular Medicine™ series is noted for providing clinicians, research scientists, and interested individuals with detailed experimental procedures that are written by leading experts in the field. Congenital Heart Disease: Molecular Diagnostics introduces a series of techniques that are currently used to identify the molecular basis for cardiovascular disease. New knowledge gained from the application of molecular genetics to medicine has had a significant impact in biomedical research. The chapters in this book update the reader on new developments in the field and introduce the technology currently used to define the molecular genetic basis for congenital malformations of the heart, cardiomyopathies, cardiac tumors, and arrhythmias in human patients. In addition, the limitations to identifying patients with congenital heart disease using this information during both pre- and postnatal periods is discussed in this volume. The experimental techniques are presented in sufficient detail to ensure that the procedures can be reproduced in any laboratory, irrespective of the level of experience of the investigators. The notes section included at the end of each chapter provides valuable insight for troubleshooting, experimental design, and data analysis that come from the benefit of the expertise of the authors who are all renowned and well-respected in the field. It is my hope that Congenital Heart Disease: Molecular Diagnostics will be a valuable resource for medical personnel, researchers, patients, and their families.

I would like to express my gratitude to the authors of this volume for their enthusiasm for the work and thoughtful input into each chapter. I would also like to thank the series editor, Professor John Walker, for his guidance and endless patience during the preparation of this volume.

This book is dedicated to my mom, Lillian Kearns, and to my family for their continuous love and support.

Mary Kearns-Jonker