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Congenital Heart Disease

Molecular Diagnostics

Edited by

Mary Kearns-Jonker

Transplantation Biology Research Lab
Division of Cardiothoracic Surgery
Children's Hospital of Los Angeles
Los Angeles, CA
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
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Contributors

ARISTOTELIS ASTRINIDIS • Department of Medical Oncology, Fox Chase Cancer Center, Philadelphia, PA

J. DAVID BARRANS • Department of Medicine, Brigham and Women’s Hospital, Boston, MA

CRAIG T. BASSON • Greenberg Cardiology Division, Department of Medicine, Weill Medical College of Cornell University, New York, NY

D. WOODROW BENSON • Division of Cardiology, Department of Pediatrics, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

ZAHURUL A. BHUIYAN • Department of Clinical Genetics, Academic Medical Center, Amsterdam, The Netherlands

HENNIE BIKKER • Department of Clinical Genetics, Academic Medical Center, Amsterdam, The Netherlands

PAUL COUCKE • Department of Medical Genetics, Ghent University Hospital, Ghent, Belgium

ANNE DE PAEPE • Department of Medical Genetics, Ghent University Hospital, Ghent, Belgium

DEBORAH A. DRISCOLL • Division of Reproductive Genetics, Department of Obstetrics and Gynecology, University of Pennsylvania Medical Center, Philadelphia, PA

NAVARATNAM ELANKO • Genetics Unit, St. George’s Hospital, London, United Kingdom

ELIZABETH GOLDMUNTZ • The Division of Cardiology, Abramson Research Center, The Children’s Hospital of Philadelphia, Philadelphia, PA

CATHY J. HATCHER • Greenberg Cardiology Division, Department of Medicine, Weill Medical College of Cornell University, New York, NY

ELIZABETH PETRI HENSKE • Department of Medical Oncology, Fox Chase Cancer Center, Philadelphia, PA

STEVE JEFFERY • Division of Medical Genetics, Department of Clinical Developmental Sciences, St. George’s University of London, London, United Kingdom

ANN M. JOSEPH-GEORGE • Genetics and Genomic Biology, The Hospital for Sick Children, Toronto, Ontario, Canada

MARY KEARNS-JONKER • Transplantation Biology Research Lab, Division of Cardiothoracic Surgery, Children’s Hospital of Los Angeles, Los Angeles, CA
CHOONG-CHIN LIEW • Department of Medicine, Brigham and Women’s Hospital, Boston, MA

DEBORAH A. McDERMOTT • Greenberg Cardiology Division, Department of Medicine, Weill Medical College of Cornell University, New York, NY

ELIZABETH MOORE • Division of Human Genetics, The Children’s Hospital of Philadelphia, Abramson Research Center, Philadelphia, PA

LUCY R. OSBORNE • Department of Medicine, The University of Toronto, Toronto, Ontario, Canada

MASSIMO PANDOLFO • Service de Neurologie, Université Libre de Bruxelles-Hôpital Erasme, Bruxelles, Belgium

ALEX V. POSTMA • Experimental and Molecular Cardiology Group, Academic Medical Center, Amsterdam, The Netherlands

STEPHEN W. SCHERER • Genetics and Genomic Biology, The Hospital for Sick Children, Toronto, Ontario, Canada

AMY J. SEHNERT • Department of Pediatrics, University of California at San Francisco, Pediatric Heart Center, San Francisco, CA; CardioDX Inc., Palo Alto, CA

SILKE SPERLING • Department of Vertebrate Genomics, Max Planck Institute for Molecular Genetics, Berlin, Germany

NANCY B. SPINNER • The Division of Human Genetics, The Children’s Hospital of Philadelphia, Abramson Research Center, Philadelphia, PA

MAY TASSABEHJI • Academic Unit of Medical Genetics, The University of Manchester, St Mary’s Hospital, Manchester, United Kingdom

JEFFREY A. TOWBIN • Pediatric Cardiology, Texas Children’s Hospital, Houston, TX

ZSOLT URBAN • Departments of Pediatrics and Genetics, Washington University School of Medicine, St. Louis, MO

PETRA VAN ACKER • Department of Medical Genetics, Ghent University Hospital, Ghent, Belgium

STEPHANIE M. WARE • Divisions of Molecular Cardiovascular Biology and Human Genetics, Department of Pediatrics, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH