

Table of Contents

List of Contributors	ix
Preface	xiii
1. Cardiology approaching the year 2000. A clinician's look at molecular cardiology <i>Hein J.J. Wellens</i>	1
Part One : Cardiovascular specific gene expression	
2. The transcriptional building blocks of the heart <i>Diego Franco, Robert Kelly, Peter Zammit, Margaret E. Buckingham and Antoon F.M. Moorman</i>	7
3. A cardiac-specific troponin I promoter. Distinctive patterns of regulation in cultured fetal cardiomyocytes, adult heart and transgenic mice <i>Stefano Schiaffino, Simonetta Ausoni, Caterina Millino, Elisa Calabria, Claudia Sandri and Raffaella Di Lisi</i>	17
4. Mice deficient in muscle LIM protein (MLP) reveal a pathway to dilated cardiomyopathy and heart failure <i>Pico Caroni</i>	27
5. Regulation of endothelial cell specific receptor tyrosine kinase gene expression during development and disease <i>Thorsten M. Schlaeger</i>	35
6. Smoothelins: one gene, two proteins, three muscle cell types so far <i>Guillaume J.J.M. van Eys, Carlie J.M. de Vries, Sander S.M. Rensen, Victor L.J.L. Thijssen, Edward L.C. Verkaar, Gisela P.G.M. Coolen, Wiel M.H. Debie, Marco C. de Ruiter and Sevilla D. Wadleigh-Detera</i>	49
Part Two : Transcription regulation	
7. Regionalization of transcriptional potential in the myocardium: 'cardiosensor' transgenic mice	

	<i>Robert G. Kelly, Peter S. Zammit, Diego Franco, Antoon F.M. Moorman and Margaret E. Buckingham</i>	67
8.	Human troponin genes: transcriptional regulation and chromosomal organization <i>Paul J.R. Barton, Pankaj K. Bhavsar, Kimberley A. Dellow, Philip J. Townsend, Magdi H. Yacoub and Nigel J. Brand</i>	75
9.	Retinoid signaling: insight from genetically engineered mice <i>Pilar Ruiz-Lozano and Kenneth R. Chien</i>	87
10.	Ventricular expression of the atrial regulatory myosin light chain gene <i>Pieter A. Doevendans, Ronald Bronsaeer, Pilar Ruiz-Lozano, Jan Melle van Dantzig and Marc van Bilsen</i>	99
11.	Expression of rat gap junction protein connexin 40 in the heart <i>W. Antoinette Groenewegen</i>	117
 Part three : Ion channels and gap junction		
12.	Sympathetic regulation of cardiac delayed rectification: relationship to cardiac arrhythmias <i>Robert S. Kass</i>	125
13.	The sarco(endo)plasmic reticulum Ca^{2+} pumps in the cardiovascular system <i>Anne-Marie Lompré, Olivier Vallot, Marielle Anger and Anne Ozog</i>	139
14.	Potassium channels; genes, proteins, and patients <i>Connie Alshinawi and Arthur A.M. Wilde</i>	151
15.	Expression of Cx43 in cardiac and aortic muscle cells of hypertensive rats <i>Jacques-Antoine Haefliger and Paolo Meda</i>	161
16.	Genetic engineering and cardiac ion channels <i>Andrew A. Grace, Richard C. Saumarez and Jamie I. Vandenberg</i>	171
 Part four : Intracellular signaling		
17.	Receptor tyrosine kinase signaling in vasculogenesis and angiogenesis <i>Thomas I. Koblizek, Werner Risau and Urban Deutsch</i>	179

18.	Molecular analysis of vascular development and disorders <i>Peter Carmeliet and Désiré Collen</i>	193
19.	Crosstalk between the estrogen receptor and the insulin-like growth factor (IGF-1) receptor. Implications for cardiac disease <i>Christian Grohé, Rainer Meyer and Hans Vetter</i>	227
20.	Expression of basic helix-loop-helix proteins and smooth muscle phenotype in the adult rat aorta <i>Paul R. Kemp and James C. Metcalfe</i>	237
21.	Expression of the IGF system in acute and chronic ischemia <i>Elisabeth Deindl, René Zimmermann and Wolfgang Schaper</i>	245
22.	Long-chain fatty acids and signal transduction in the cardiac muscle cell <i>Marc van Bilsen, Karin A.J.M. van der Lee and Ger J. van der Vusse</i>	257
Part five : DNA transfer		
23.	Reduction of kidney renin expression by ribozymes <i>Matthew G.F. Sharp, Jörg Peters and John J. Mullins</i>	269
24.	Receptor-dependent cell specific delivery of antisense oligonucleotides <i>Erik A.L. Biessen and Theo J.C.van Berkel</i>	285
25.	Tissue-specific gene delivery by recombinant adenoviruses containing cardiac-specific promoters <i>Wolfgang-Michael Franz, Thomas Rothmann, Matthias Müller, Norbert Frey and Hugo Albert Katus</i>	301
26.	Catheter-mediated delivery of recombinant adenovirus to the vessel wall to inhibit restenosis <i>Olivier Varenne, Peter Sinnaeve, Désiré Collen, Stefan P. Janssens and Robert D. Gerard</i>	319
Index		325