

Contents

Preface	vii
1 The Role of Maternal Factors in Early Zebrafish Development <i>Francisco Pelegri</i>	1
2 Gastrulation in Zebrafish <i>Florian Ulrich and Carl-Philipp Heisenberg</i>	39
3 Development of the Zebrafish Organizer and Notochord <i>Kevin A. Thomas and Derek L. Stemple</i>	87
4 Formation and Functions of the Floor Plate <i>Jing Tian and Karuna Sampath</i>	121
5 Form and Function in the Zebrafish Nervous System <i>Michael Hendricks and Suresh Jesuthasan</i>	164
6 Development of the Primary Nervous System of the Zebrafish Embryo <i>Uwe Strähle and Vladimir Korzh</i>	185
7 Making Scents: Development and Function of the Olfactory Sensory System <i>Kathleen E. Whitlock</i>	216
8 Somite Segmentation: A View from Fish <i>Hiroyuki Takeda and Yumiko Saga</i>	261

9	Vertebrate Somite Development, Notch Signaling and Others <i>Yun-Jin Jiang</i>	294
10	Molecular Regulation of Fish Muscle Development and Growth <i>Shao Jun Du</i>	339
11	Skeletogenesis in Zebrafish <i>Danio rerio</i> : Evolutionary and Developmental Aspects <i>Shannon Fisher and Paula M. Mabee</i>	392
12	Endoderm Formation in Zebrafish <i>Nicolas B. David, Philippe Mourrain and Frédéric M. Rosa</i>	424
13	Gene 'Knockdown' Approaches Using Unconventional Antisense Oligonucleotides <i>Eleanor Chen, Perry B. Hackett and Stephen C. Ekker</i>	454
14	Transgenic Fish for Developmental Biology Studies <i>Zhiyuan Gong, Yi Lian Wu, Sudha Puttur Mudumana and Shuo Lin</i>	476
15	Cloning the Zebrafish <i>Bensheng Ju, Haigen Huang, Ki-Young Lee and Shuo Lin</i>	517
16	Applications of Transposable Elements in Fish for Transgenesis and Functional Genomics <i>Perry B. Hackett, Karl J. Clark, Stephen C. Ekker and Jeffrey J. Essner</i>	532
17	Evolution of the Zebrafish Genome <i>John H. Postlethwait</i>	581
18	Medaka Genome Mapping for Functional Genomics <i>Hiroshi Mitani, Akihiro Shima, Kiyoshi Naruse and Minoru Tanaka</i>	612
19	Medaka Embryonic Stem Cells <i>Hong Yunhan and Manfred Schartl</i>	637