

Contents

Foreword	v
Preface	vii
1. Introduction—Pollution and Fish Health in Tropical Ecosystems: A Brief Summary on Current Challenges and Perspectives	1
<i>Eduardo Alves de Almeida, Aline Cristina Ferreira Rodrigues and Ciro Alberto de Oliveira Ribeiro</i>	
2. Genes and Proteins Related with Biotransformation in Tropical Fishes: Perspectives in Aquatic Toxicology	15
<i>Juliano Zanette</i>	
3. Nuclear Receptors in Fish and Pollutant Interactions	35
<i>Afonso C.D. Baimy, Jacó J. Mattos and Marília N. Siebert</i>	
4. Fish Neurotoxic Pollutants	51
<i>Helena Cristina Silva de Assis and Maritana Mela</i>	
5. Pollutants and Oxidative Stress	84
<i>Francisco Filipak Neto</i>	
6. Genotoxicity and Mutagenicity	132
<i>Marta Margarete Cestari</i>	
7. The Use of Fish Biomarkers in the Evaluation of Water Pollution	164
<i>Thiago E.M. Parente and Rachel Ann Hauser-Davis</i>	
8. Blood Parameters of Estuarine and Marine Fish as Non-Destructive Pollution Biomarkers	182
<i>R. Seriani, D.M.S. Abessa, C.D.S. Pereira, A.A. Kirschbaum, L.D. Abujamara, L.M. Buruaem, C. Félix, G.C.R. Turatti, L.R.G.B. Prado, E.C.P.M. Sousa and M.J.T. Ranzani-Paiva</i>	
9. Histopathological Markers in Fish Health Assessment	206
<i>Ciro Alberto de Oliveira Ribeiro and Marisa Fernandes Narciso</i>	

10. Emerging Contaminants and Endocrine System Dysfunction	243
<i>Daniele Dietrich Moura Costa</i>	
11. Nanoecotoxicology in Fish Species	312
<i>Juliane Ventura-Lima, Alessandra Martins da Rocha, Marlize Ferreira-Cravo, André Luís da Rosa Seixas, Carmen Luiza de Azevedo Costa, Isabel Soares Chaves, Josencler Luis Ribas Ferreira, Rafaela Elias Letts, Lucas Freitas Cordeiro, Glauce R. Gouveia and José Maria Monserrat</i>	
12. Effect of Pollutants on Condition Index	338
<i>Larissa Paola Rodrigues Venancio and Claudia Regina Bonini Domingos</i>	
13. Behavioral Biomarkers and Pollution Risks to Fish Health and Biodiversity	350
<i>Paulo Sérgio Martins de Carvalho</i>	
Index	379
Color Plate Section	389