

Contents

Preface	v
Measuring and Monitoring POPs: A Critique R. S. S. Wu, A. K. Y. Chan, B. Richardson, D. W. T. Au, J. K. H. Fong, P. K. S. Lam and J. P. Giesy	1
Fish Models in Impact Assessment of Carcinogenic Potential of Environmental Chemical Pollutants: An Appraisal of Hermaphroditic Mangrove Killifish <i>Kryptolebias marmoratus</i> S. Raisuddin and J.-S. Lee	7
Research on Ecotoxicology and Applications in Singapore: Description of the Sponge Aggregation Assay B. Goh	17
Perspective of Ecotoxicological Conduction for Water Quality Monitoring in Thailand N. Tapaneeyakul	31
Chronic Effects of Waterborne PFOS Exposure on Growth, Development, Reproduction and Hepatotoxicity in Zebrafish Y. Du, X. Shi, K. Yu, C. Liu and B. Zhou	37
Testicular Toxicity of Arsenic on Spermatogenesis in Fish F. T. Celino, S. Yamaguchi, C. Miura and T. Miura	55
Prostanoid Signaling Mediates Circulation Failure Caused by TCDD in Developing Zebrafish H. Teraoka, A. Kubota, Y. Kawai and T. Hiraga	61
Molecular Basis for Differential Dioxin Sensitivity in Birds: Characterization of Avian AHR Isoforms E.-Y. Kim, H. Iwata, T. Yasui, N. Inoue, J.-S. Lee, D. G. Franks, S. I. Karchner, M. E. Hahn and S. Tanabe	81
Application of Bioassays for the Detection of Dioxins and Dioxin-like Compounds in Wastes and the Environment H. Takigami, G. Suzuki and S. Sakai	87
Modulation of Expression of Oxidative Stress Genes of the Intertidal Copepod <i>Tigriopus japonicus</i> after Exposure to Environmental Chemicals J.-S. Lee and S. Raisuddin	95

Application of Ascidian DNA Microarray Analysis for Risk Assessment of Marine Chemical Pollutants K. Azumi, S. Amano, S. V. Sabau, A. Kamimura, N. Satoh and R. Koyanagi	107
Immune Gene Expression Levels Correlate with the Phenotype of Japanese Flounder Exposed to Heavy Oil J.-Y. Song, K. Nakayama, Y. Murakami and S.-I. Kitamura	111
Yeast OMICS System for Environmental Toxicology Y. Tanaka, T. Higashi, R. Rakwal, J. Shibato, S. Wakida and H. Iwahashi	123
Genomic Response in <i>Daphnia</i> to Chemical Pollutants H. Watanabe, K. Kobayashi, Y. Kato, S. Oda, R. Abe, N. Tatarazako and T. Iguchi	133
Medaka DNA Microarray: A Tool for Evaluating Physiological Impacts of Various Toxicants K. Kishi, E. Kitagawa, H. Iwahashi, K. Suzuki and Y. Hayashi	143
Sensing of Heavy Metals Using <i>Caenorhabditis elegans</i> DNA Microarray N. Tominaga, T. Matsuno, S. Kohra and K. Arizono	155
Application of Microarray Technology to Toxicity Evaluation in Wild Common Cormorants Contaminated with Persistent Organic Pollutants K. Nakayama, H. Iwata, L. Tao, K. Kannan, M. Imoto, E.-Y. Kim, K. Tashiro and S. Tanabe	163
Effects of Heavy Oil on the Developing Japanese Flounder <i>Paralichthys Olivaceus</i> H. Nokame, S.-I. Kitamura, K. Nakayama, S. Matsuoka, H. Sakaguchi and Y. Murakami	171
Genetic Polymorphisms Influencing Arsenic Metabolism in Human: Evidence from Vietnam T. Agusa, J. Fujihara, T. B. Minh, P. T. K. Trang, H. Takeshita, H. Iwata, P. H. Viet and S. Tanabe	179
Low Induction Potencies of Cytochrome P450 2B and 3A by Persistent Organic Pollutants in Baikal Seal (<i>Pusa sibirica</i>) H. Sakai, H. Iwata, E.-Y. Kim, E. A. Petrov and S. Tanabe	187
Effects of Dioxins and Related Compounds in the Liver of Wild Baikal Seals: An Implication from a Toxicogenomic Approach S. Hirakawa, D. Imaeda, K. Nakayama, E.-Y. Kim, T. Kunisue, S. Tanabe, E. A. Petrov, V. B. Batoev and H. Iwata	197
Interspecies Difference in Susceptibility of TCDD-induced Avian CYP1A5 Transactivation is Dependent on AHR1, not on CYP1A5 Promoter/Enhancer Region J.-S. Lee, E.-Y. Kim, H. Iwata and S. Tanabe	207

Molecular Characterization of Avian Metallothionein (MT) 1 and 2 Isoforms: mRNA Expression, Transactivation Potency, and Detoxification Potential Associated with Element Exposure D.-H. Nam, E.-Y. Kim and H. Iwata	225
Vacuolar-type H ⁺ -Translocating ATPase is the Target of Tributyltin Chloride K. Akiyama, S. Chardwiryapreecha, T. Chahomchuen, N. Sugimoto, T. Sekito, S. Nishimoto, T. Sugahara and Y. Kakinuma	241
Characterization of the Vacuolar Transporters for Amino Acid Recycling in Yeast Autophagy T. Chahomchuen, T. Sekito, K. Hondo, S. Nishimoto, T. Sugahara and Y. Kakinuma	251
The Structure-Activity Relationships of Flaxseed Lignan, Secoisolariciresinol T. Sugahara, S. Yamauchi, S. Nishimoto, A. Kondo, F. Ohno, S. Tominaga, Y. Nakashima, T. Kishida, K. Akiyama, M. Maruyama and Y. Kakinuma	263
Risk Assessment of Heavy Oil on Terrestrial Mammals S. Nishimoto, M. Yamawaki, S.-I. Kitamura, K. Akiyama, Y. Kakinuma and T. Sugahara	269
The Role of the Earthworm, <i>Pheretima (Metaphire) hilgendorfi</i> , in Terrestrial Ecosystem Nutrient Cycling M. Nozaki, C. Miura, Y. Tozawa and T. Miura	275
Toxicological Effects of Heavy Oil on Carp by NMR-based Metabolic Profiling of Plasma S. Uno, E. Kokushi and J. Koyama	281
<i>In vitro</i> and <i>in vivo</i> Estrogenic Effects of Fluorotelomer Alcohols in Medaka (<i>Oryzias latipes</i>) H. Ishibashi, R. Yamauchi, M. Matsuoka, J.-W. Kim, M. Hirano, A. Yamaguchi, N. Tominaga and K. Arizono	291
Expression Analysis of Ecdysone Receptor and Ultraspiracle through Molting Period in Mysid Crustacean, <i>Americamysis bahia</i> M. Hirano, H. Ishibashi, R. Yamauchi, J.-W. Kim and K. Arizono	303
Temporal Variation of PCDDs, PCDFs and PCBs in Baikal Seals (<i>Pusa sibirica</i>) D. Imaeda, T. Kunisue, Y. Ochi, H. Iwata, O. Tsydenova, S. Takahashi, M. Amano, E. A. Petrov, V. B. Batoev and S. Tanabe ..	311
Hydroxylated Polychlorinated Biphenyls in the Blood of Cetacean Species Stranded along the Japanese Coast S. Murata, T. Kunisue, S. Takahashi, T. K. Yamada and S. Tanabe	321
Polybrominated Diphenyl Ethers and Hexabromocyclododecanes in Japanese Human Adipose Tissues T. Isobe, H. Oda, N. Takayanagi, T. Kunisue, M. Nose, T. Yamada, H. Komori, N. Arita, N. Ueda, S. Takahashi and S. Tanabe	331

Spatial Distribution and Accumulation of Organohalogen Compounds in Human Breast Milk from the Philippines G. Malarvannan, T. Kunisue, T. Isobe, A. Sudaryanto, S. Takahashi, M. Prudente and S. Tanabe	339
Cell-to-cell Contact is Required for Transfer of Tetracycline Resistance Gene <i>tet(M)</i> in Marine Bacteria F. A. Neela, N. Nagahama and S. Suzuki	349
Occurrence Rates of Sulfamethoxazole and Erythromycin-Resistant Bacteria and Drug Concentrations in Wastewater of Integrated Aquaculture-Agriculture (VAC) Sites in Northern Vietnam P. T. P. Hoa, S. Managaki, N. Nakada, H. Takada, D. H. Anh, P. H. Viet and S. Suzuki	355
Comparative Study of Pesticide Effects (Herbicide and Fungicide) on Zooplankton Community K.-H. Chang, M. Sakamoto, J.-Y. Ha, T. Murakami, Y. Miyabara, S. Nakano, H. Imai, H. Doi and T. Hanazato	361
Succession of Harmful Algae <i>Microcystis</i> (Cyanophyceae) Species in a Eutrophic Pond H. Imai, K.-H. Chang, M. Kusaba and S. Nakano	367