

CONTENTS

Editorial			
A.M. Gonçalves and J.M. Neto			
<i>Populus nigra</i> L. as a bioindicator of atmospheric trace element pollution and potential toxic impacts on human and ecosystem			
A. Yalaltdinova (Russia), J. Kim (France), N. Baranovskaya and L. Rikhvanov (Russia)	973	Heat wave impacts on the model diatom <i>Phaeodactylum tricornutum</i> : Searching for photochemical and fatty acid biomarkers of thermal stress	
Biological endpoints in earthworms (<i>Amyntas gracilis</i>) as tools for the ecotoxicity assessment of soils from livestock production systems		E. Feijão, C. Gameiro, M. Franzitta, B. Duarte, I. Caçador, M.T. Cabrita and A.R. Matos (Portugal)	1026
C. Parelho, A.d.s. Rodrigues, F. Bernardo, M. do Carmo Barreto (Portugal), L. Cunha (UK, Brazil), P. Poeta and P. Garcia (Portugal)	974	Photochemical features and trace element substituted chlorophylls as early detection biomarkers of metal exposure in the model diatom <i>Phaeodactylum tricornutum</i>	
Assessment of metal exposure (uranium and copper) by the response of a set of integrated biomarkers in a stream shredder		M.T. Cabrita, B. Duarte, C. Gameiro, R.M. Godinho and I. Caçador (Portugal)	1038
M. Tagliaferro (Argentina), A.M.M. Gonçalves, M. Bergman, O. Sobral and M.A.S. Graça (Portugal)	984	Is the cell wall of marine phytoplankton a protective barrier or a nanoparticle interaction site? Toxicological responses of <i>Chlorella autotrophica</i> and <i>Dunaliella salina</i> to Ag and CeO ₂ nanoparticles	
Gastropods as potential biomonitors of contamination caused by heavy metals in South Ural lakes, Russia		M. Sendra, J. Blasco and C.V.M. Araújo (Spain)	1053
T.G. Krupnova, I.V. Mashkova, A.M. Kostryukova, E.E. Schelkanova and S.V. Gavrilkina (Russia)	991	The use of the biomarker imposex to assess the environmental status of aquatic ecosystems regarding tributyltin pollution	
17 α -ethynilestradiol and tributyltin mixtures modulates the expression of NER and p53 DNA repair pathways in male zebrafish gonads and disrupt offspring embryonic development		F. Laranjeiro (Portugal, Spain), R. Beiras (Spain) and C. Barroso (Portugal)	1068
J. Soares, T. Neuparth, A. Lyssimachou, D. Lima, A. André, M.A. Reis-Henriques, L.F.C. Castro, A.P. Carvalho, N.M. Monteiro and M.M. Santos (Portugal)	1001	Using biomarkers to address the impacts of pollution on limpets (<i>Patella depressa</i>) and their mechanisms to cope with stress	
Cholinesterases as environmental biomarkers to address the putative effects of low, realistic levels of waterborne uranium		C.S.E. Silva (Portugal), S.C. Novais, T. Simões (Portugal, The Netherlands), M. Caramalho, C. Gravato, M.J. Rodrigues, P. Maranhão and M.F.L. Lemos (Portugal)	1077
B. Nunes, B.B. Castro, J. Gomes, T. Carvalho and F. Gonçalves (Portugal)	1008	Metal bioaccumulation and oxidative stress profiles in <i>Ruditapes philippinarum</i> – insights towards its suitability as bioindicator of estuarine metal contamination	
	1019	A. Marques, D. Piló (Portugal), S. Carvalho (Portugal, Saudi Arabia), O. Araújo, S. Guilherme, M.A. Santos, C. Vale, F. Pereira, M. Pacheco and P. Pereira (Portugal)	1087

(Contents continued on inside back cover)

Tools to assess effects of human pharmaceuticals in fish: A case study with gemfibrozil M. Oliveira (Portugal), L. Franco, J.C. Balasch, C. Fierro-Castro, A. Tvarijonaviciute (Spain), A.M.V.M. Soares (Portugal), L. Tort and M. Teles (Spain)	1100	Can non-invasive methods be used to assess effects of nanoparticles in fish? M. Oliveira (Portugal), A. Tvarijonaviciute (Spain), T. Trindade, A.M.V.M. Soares (Portugal), L. Tort (Spain) and M. Teles (Spain, Portugal)	1118
Early-warning biomarkers to assess the exposure to atrazine in sea lamprey downstream migrants M.J. Lança, M. Machado, A.F. Ferreira, J.S. Carrola, B.R. Quintella (Portugal), A. Moore (UK) and P.R. Almeida (Portugal)	1108	Integrated multivariate approach of ecological and ecotoxicological parameters in coastal environmental monitoring studies L.R. Vieira, F. Morgado, A.J.A. Nogueira, A.M.V.M. Soares and L. Guilhermino (Portugal)	1128