

Biomarker responses of the freshwater clam *Corbicula fluminea* in acid mine drainage polluted systems

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© 2018 Elsevier Ltd The environmental quality of an acid mine drainage polluted river (Odiel River) in the Iberian Pyrite Belt (SW Spain) was assessed by combining analyses of biomarkers (DNA strand breaks, LPO, EROD, GST, GR, GPx) in freshwater clams (*Corbicula fluminea*) exposed during 14 days and correlated with metal(loid) environmental concentrations. Results pointed that enzymatic systems are activated to combat oxidative stress in just 24 h. Along exposure, there were homeostatic regulations with the glutathione activity that influenced in lipid peroxidation oscillations, provoking significant DNA strand damage after 14 exposure days. EROD activity showed no changes throughout the exposure period. The Asian clam displayed balance biomarkers of exposure?antioxidant activity under non?stressfully environments; meanwhile, when was introduced into acid polymetallic environments, such as the acid mine drainage, its enzymatic activity was displaced towards biomarkers of effect and the