



Editorial

7th Biannual ECOTOXICOLOGY MEETING (BECOME 2016) - Managing aquatic and terrestrial environments: An ecotoxicological perspective



This special issue collected papers reporting about the research activities and case studies presented during the “7th Biannual ECOTOXICOLOGY MEETING (BECOME 2016) - Managing aquatic and terrestrial environments: an ecotoxicological perspective” held in November 22th–24th, 2016, at the Natural History Museum of Livorno (Italy). Previous similar events were organized as listed: 6th March 2001, Rome, Italy; 17th–18th October 2006, Viareggio, Lucca, Italy; 25th–26th October 2008, Viareggio, Lucca, Italy; 20th–22th October 2010, Livorno, Italy; 7th–9th November 2012, Livorno, Italy; and 11th–13th November 2014, Livorno, Italy.

BECOME 2016 was organized by ISPRA, the National Research Centre (CNR), Marche Polytechnic University (UNIVPM), Emilia Romagna Environmental Protection Agency (EPA), Toscana EPA, Eurofins srl and Shoreline Soc. COOP. The scientific committee was composed of affiliates to ISPRA, CNR Institute of Ecosystem Study (ISE), CNR Institute of Marine Sciences, (ISMAR), University of Naples Federico II, University Ca' Foscari Venice, University of Piemonte Orientale (UNIPMN), UNIVPM, University of Siena, University of Pisa, University of Rome TorVergata (UNIROMAII), Italian Centre for Marine Biology (CIBM), Abruzzo EPA, Emilia Romagna EPA, Marche EPA, Toscana EPA, Ecotox Lds, Eurofins srl, and Shoreline Soc. COOP. The meeting received financial support by the Italian Institute for the Environmental Protection and Research (ISPRA), Ecotox Lds, Microbiotest Inc., Modern Water plc, Environmental Bio-detection Products Inc. (EBPI), Labromare Srl, Acque Industriali Srl and University Ca' Foscari Venice.

BECOME 2016 aimed to foster the role of ecotoxicology in the safeguard and management of aquatic and terrestrial environments including innovative approaches and monitoring scenarios, considering the evaluation of contaminants of emerging concern with a special focus on the dichotomy between ecotoxicology and legislation. BECOME 2016 offered the opportunity at the scientific community, public authorities and private sector interested in the field of ecotoxicology and its applications to interact each other.

A one-day satellite event about the “1st International Workshop Ecofriendly Nanotechnologies: State-of-the-art, future perspectives and ecotoxicological evaluation of nano-remediation applied to contaminated sediments” was also organized as reported in Corsi et al. (2018).

The subjects covered within this special issue have been summarized in four main topics:

1) Development of cutting edge ecotoxicological assays and improvements of already established methods. Various toxicity endpoints

related to endocrine disruption (Biandolino et al., 2018; Cacciatore et al., 2018a, 2018b), embryotoxicity (Buttino et al., 2018; Morrioni et al., 2018), immunotoxicity (Alijagic and Pinsino, 2017), sperm-cell toxicity (Gallo et al., 2018), alteration of locomotor activity (Morgana et al., 2018), growth rate (Manfra et al., 2017) were investigated in several marine model organisms and proposed as new effective tools for ecotoxicological investigation both at laboratory and field scales.

- 2) Assessment of toxicity of contaminants of emerging concern. A wide range of analytical tools were studied at different levels of biological complexity (from molecular to whole organism level) in both aquatic and terrestrial ecosystems in order to understand the mechanisms underlying the toxicity of several toxicants such as algal toxins (Ruocco et al., 2017), metals and metalloids (Sturba et al., 2018; Moreira et al., 2018), antibiotics (Bellino et al., 2018), phthalates (Di Lorenzo et al., 2018), microplastics (Gambardella et al., 2017) and nanoparticles (Manesh et al., 2018; Manfra et al., 2018; Morelli et al., 2018; Rotini et al., 2018).
- 3) Application of ecotoxicological approaches in freshwater and coastal field studies considering both routine monitoring (Baldantoni et al., 2018; Gurung et al., 2018; Cacciatore et al., 2018a, 2018b) and environmental emergences (Fabbrocini et al., 2017).
- 4) Ecotoxicology as a tool for the assessment of environmental sustainability of productive processes (Grenni et al., 2018; Guarino et al., 2018; Croce et al., 2017; Da Ros et al., 2018) including wastewater treatment (Pedrazzani et al., 2018; Basiglioni et al., 2018).

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