

**Sustainable and safe water management in agriculture:
increasing the efficiency of water reuse for crop growth while
protecting ecosystems, services and citizens' welfare - REWATER**

Newsletter no 3, 2018



The project

REWATER proposes to develop an innovative joint research and application of technologies producing a final integrated solution for reuse of wastewater (WW) for agricultural purposes, and their economic and environmental evaluation with a Life Cycle Assessment. This systematic approach, inspired in technological, organizational and bio-based economy, will minimize negative impacts of WW reuse in the environment, decreasing the undesirable introduction of emerging contaminants (ECs) in agriculture and aquatic systems and reducing their spread within the food chain.

Work programme includes tuned improvement or development of:

- 1) biosensors for in-field rapid and selective detection of micropollutants and their corresponding metabolites and/or degradation products (MMDs),
- 2) treatment processes for MMDs removal through integration of electrochemical and biological technologies,
- 3) ecotoxicological tools to evaluate treated water for reuse and develop expeditious surveillance, and
- 4) analytical monitoring, scaling-up and environmental/economic assessment.

REWATER will provide tools and solutions contributing to WW reuse, environmental health, and economic and social welfare.

Project meeting and conference participation

Representatives of the partners from Portugal, Spain and Romania participated from 14 to 17 November 2018 to the second Edition of WaterEnergyNEXUS Conference, in Salerno (Italy).

Oral presentations

- Sulfate radicals-based technology as a promising strategy for wastewater management, María Arellano, M. Ángeles Sanromán, Marta Pazos
- Embryotoxicity and molecular alterations of fluoxetine and norfluoxetine in early zebrafish larvae, Rodrigues, P., Cunha, V., Ferreira, M. Guimarães, L.
- Electrochemical sensors for emerging contaminants: diclofenac preconcentration and detection on paper-based electrodes, E. Costa-Rama, Henri P.A. Nouws, C. Delerue-Matos¹, M.C. Blanco-Lopéz, M.T. Fernández-Abedul
- Performance of Electro-Fenton water treatment technology in decreasing zebrafish embryotoxicity elicited by a mixture of organic contaminants, João Amorim, Carlos Pinheiro, Isabel Abreu, Pedro Rodrigues, Ángeles Sanromán, Emílio Rosales, Marta Pazos António Soares, Cristina Delerue-Matos, Aurélia Saraiva, Luís Oliva-Teles, António Paulo Carvalho, Laura Guimarães

Poster presentation

- Fluoxetine and pirimicarb abatement by ecofriendly electro-Fenton process, E. Rosales, A. Soares, G. Buftia, M. Pazos, G. Lazar, C. Delerue, M.A. Sanromán

The consortium



Contacts

Project Coordinator
[Cristina Delerue-Matos](#)

Contact Point for Communication/ Dissemination activities
[Gabriel Lazar](#)

Contact Point for Open Data/Open Access activities
[Henri Nouws](#), [Manuela Correia](#)

