

Abstract

Water is the most abundant and indispensable resource on our planet. However, freshwater distribution is very different from region to region, which brings with it a very problematic scenario for drinking water availability, especially following hydro-climatic extreme events.

One viable and low-cost solution to provide direct access to drinking water, refers to implementing Point-Of-Use (POU) systems for water purification and desalination. Yet, before doing so, the issues identified by end-users/consumers regarding filters disposal and recycling should be properly addressed.

Thereby, the aim of the WATER-BIOFIL project proposal is to design & assemble & test next generation compostable filters, prepared from biodegradable polymers and/or bio-sourced polymers, which can be thereafter integrated in regular POU systems, and further serve their purpose as first-aid tools to cope with hydro-climatic extreme events, while diminishing the environmental impact of hazardous materials.

Considering the proposed aim of the project and the transdisciplinary character of the foreseen activities, the project consortium is joining three renowned RDI entities, from Romania, France and Poland, with expertise in materials science and functional biomaterials (as technology developers), and other three SMEs from Romania, France and Poland (as technology integrators), with expertise on water purification and waste management.

The six Partners are developing complementary activities according to their expertise and skills to ensure further development and/or build-up a multi-disciplinary knowledge in a long-term perspective innovation, value creation and assistance in solving societal challenges. The project proposal addresses the required Polish, French, Romanian and EU impacts, with respect to the objectives of WATER4ALL, on ensuring water security for all and reducing environmental hazards.



► **Project coordinator:** **Tanta Verona IORDACHE**
NATIONAL INSTITUTE FOR RESEARCH & DEVELOPMENT IN CHEMISTRY AND PETROCHEMISTRY- ICECHIM - ROMANIA

► Project partners

- ADAM MICKIEWICZ UNIVERSITY - POLAND
- EDAS EXIM SRL - ROMANIA
- MARINE TECH S.A.S - FRANCE
- PRESSEKO SPÓŁKA Z O. O. - POLAND
- UNIVERSITE DE TOULON - FRANCE

► Funding organisations

UEFISCDI (ROMANIA) / NCBR (POLAND) / ANR (FRANCE)

► Duration

3 years

► Contact

Tanta Verona IORDACHE
tanta-verona.iordache@icechim.ro



KEYWORDS

Drinking water treatment, Water scarcity management, Bioremediation, biodegradation, Bioproducts (products that are manufactured using biological material as feedstock) biomaterials, bioplastics, biofuels, bioderived bulk and fine chemicals, bio-derived novel materials, Chemical engineering