PhD Position on Urban Stormwater & Nature-Based Treatment Solutions

The role

We offer a 3-year PhD position within the "DRAIN" project (AEI PID2025). This thesis will be supervised by Dr. Marc Teixidó and Dr. Sandra Pérez at the Institute of Environmental Assessment and Water Research (IDAEA-CSIC). The research aims at investigating the occurrence, fate, and removal of emerging organic contaminants (trace organics) and trace metals in urban stormwater, with the goal of understanding urban water cycle dynamics and advancing nature-based treatment solutions.

The work will combine field sampling and monitoring of urban stormwater related sites (green infrastructure pilots) in the Area Metropolitana de Barcelona, advanced analytical method development (LC-MS/MS, LC-HRMS, ICP-MS), lab-scale experiments, and communicating results through scientific publications and participation in international conferences.

What do we look for?

Qualifications

MSc degree in Environmental/Chemical/Civil Engineering, Chemistry, Environmental Sciences, Geology, Geological Engineering, or any related field.

Professional experience

Previous laboratory, field, and analytical methodology experience is not required but highly valued

Competences

Strong interest in emerging organic micropollutant occurrence, fate, and removal/treatment processes. Advanced spoken and written English is required.

Working conditions

Contract duration: 3 years

Estimated annual gross salary: 23,800 euros

Target start date: December 2026 / January 2027

The Research groups

The Groundwater and Hydrogeochemistry group (Geosciences Dept.). studies the hydraulic, chemical, thermal, and mechanical processes that take place in porous media from pore to regional scale. The group employs mathematical, numerical, and analytical approaches as well as laboratory- and field-scale experiments and sampling methods (using hydraulic, hydro-geochemical and environmental isotope data sampled directly or through specifically designed tests). Applications include the assessment and management of groundwater resources, groundwater and soil remediation, the management of urban aquifers, the study of emerging inorganic and organic pollutants in urban aquifers and artificial recharge facilities, the study of wetlands, seawater intrusion in coastal aquifers, water management in mining operations, civil works (green infrastructure), storage of waste and/or its recovery, water decontamination methodologies, the study of the unsaturated zone, the study of the hydro-thermo-mechanical and chemical processes associated with the injection and extraction of fluids at great depth.

The mission of ONHEALTH group (Environmental Chemistry Dept.) is to enhance the understanding of the sources, occurrence, fate and behavior of pollutants of anthropogenic and biogenic origin and their impact on the environment and human health. The major focus is on engineered systems, aquatic environments, terrestrial habitats, and the exposure to living organisms. To achieve these goals, we employ four main research lines: 1) Chemical and biological analysis to reliably detection and measurement at ultra-trace levels of contaminants in different matrices; 2) Conduct controlled conditions experiments at our research facilities; 3) Assess the impact of complex mixtures in environment and humans; 4) Assess the biota and human exposure through different routes (dietary, inhalation, dermal).

The institute

The **Institute of Environmental Assessment and Water Research (IDAEA)** is the leading research institute of the Spanish National Research Council (CSIC), recognised with the Severo Ochoa Centre of Excellence accreditation in 2019.

Dedicated to understanding and addressing today's most pressing environmental challenges, IDAEA investigates the interactions between environmental stressors, ecosystems and human health through a One Health approach, generating knowledge and solutions that contribute to a more sustainable and resilient future.

Bringing together expertise in analytical chemistry, biology, toxicology, atmospheric sciences, hydrogeology, geology, environmental engineering and data science, IDAEA combines fundamental and applied research to understand environmental processes, assessing emerging risks and developing innovative solutions for pollution prevention, sustainable resource management and environmental protection.

Its research encompasses contaminants of emerging concern, air quality, water systems, global change, biogeochemical processes, circular economy and advanced environmental monitoring and modelling.

We offer a diverse and inclusive environment where no discrimination based on disability, gender, nationality, religion or sexual orientation will occur during the selection process.

How to apply?

Those interested may email their **CV** and **motivation letter** to **Dr. Marc Teixidó** at marc.teixido@idaea.csic.es and/or **Dr. Sandra Pérez** at sandra.perez@idaea.csic.es adding “DRAIN position” to the email subject.

Deadline: 1st December 2026