



Funded by CDTI. Supported by the ministry of economy and competitiveness

Integrated Research on Sustainable Islands INNPRONTA Programme 2011

GLOBAL INTELLIGENT SOLUTIONS

Intelligent
cities
project

IISIS

IISIS: TOWARDS SUSTAINABLE AND SELF-SUFFICIENT URBANISATION

IISIS makes progress in the "future urbanisation" concept, which includes self-sufficiency and sustainability as key factors which help it to evolve and respond to changes that arise over its useful life, providing an integrated vision of the intelligent city for the first time. IISIS develops innovative technologies in building materials, energy production, drinking water supply and waste treatment, all of which are integrated into an intelligent management and control system that results in a sustainable city in harmony with its residents and surroundings.

Aqualia's work, which includes leading two of the four project areas, "Water and Environment" and "Integration", is carried out in several Spanish regions:



- Wastewater treatment (anaerobic membrane bioreactors, Community of Valencia).
- Novel desalination systems with zero energy cost (microbial desalination cells, Com. Madrid) (header and close photographs).
- Optimisation systems of water and energy coupling in drinking water supply (Community of Valencia).
- Energy optimisation in wastewater treatment (Asturias, Cantabria and Castilla-León).
- Filtration systems with membranes in drinking water treatment (Castilla-La Mancha).
- Trihalomethane removal from drinking water (Extremadura).
- Supply management (national level).

BUDGET

Total 15 million euros; Aqualia: 3,3 million euros (22% of the overall budget).

EMPLOYMENT

IISIS creates direct employment by means of the hiring of researchers through Aqualia, who work in collaboration with technology centres (fostering direct university/research-company centre interaction) and indirect by initiating new business lines.

MAIN INTERNATIONAL INTERACTIONS

- “European Innovation Partnership” in Water (EIP Water) (Action Group: “Anaerobic membrane bioreactors for energy and resource recovery”).
- “International Water Association” (IWA).
- “Smart Water Networks Forum” (SWAN).

COLLABORATIONS WITH UNIVERSITIES AND TECHNOLOGY CENTRES

aqualia collaborates with Fundación Instituto Madrileño de Estudios Avanzados-Agua [Madrid Institute for Advanced Studies-Water] (IMDEA-Water, Alcalá de Henares, Madrid), the Universidad Politécnica de Valencia (UPV) [Technical University of Valencia], the University of Valencia (UV) and the Fundación Centro de las Nuevas Tecnologías del Agua [New Water Technology Foundation Centre] (CENTA, Carrión de los Céspedes, Seville) through the corresponding subcontracting agreements.

PROJECT PARTICIPANTS

Coordinator



FCC companies



Other enterprises



Investigation Organisms



Small and medium businesses



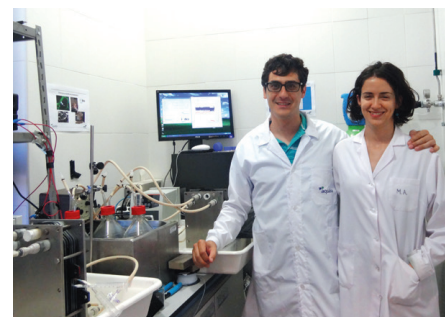
PARTICIPATION IN NATIONAL AND INTERNATIONAL FORUMS

- “European International Society for Microbial Electrochemistry and Technology Meeting” (2012, Belgium).
- “New Developments in IT & Water Conference” (2012, The Netherlands).
- “Smart City Expo World Congress” (2012, Barcelona, Spain).
- “New Trends in Biological Wastewater Treatment: Water and Energy”. Summer Course, the University of Alcalá (2013, Madrid, Spain).
- “IWA 13th World Congress on Anaerobic Digestion: Recovering (bio) Resources for the World” (2013, Santiago de Compostela, Spain).
- “34th Electrochemistry Meeting of the Spanish Royal Society of Chemistry” (2013, Valencia, Spain).
- “7th IWA Specialised Membrane Technology Conference and Exhibition for Water and Wastewater Treatment and Reuse” (2013, Canada).
- “4th International Microbial Fuel Cell Conference” (2013, Australia).
- “11th IWA Conference on Instrumentation Control and Automation” (ICA 2013) (2013, France).

INNPRONTA

The aim of the INNPRONTA programme is to foster stable public-private cooperation in research and development (R&D) in areas of strategic importance for the development of the Spanish economy, providing funding by means of loans and grants to the biggest industrial research projects. In the first call for applications (2011), seven from the forty-two submitted projects were approved. Aqualia participates in two of them:

- **IISIS:** Integrated Research On Sustainable Islands.
- **ITACA:** “Research into treatment, reuse and control technology for the future sustainability of water purification”.



aqualia in IMDEA-Agua (Juan M. Ortiz, aqualia and Amor Larrosa, IMDEA-Agua, IISIS investigators)