



MEDIA RELEASE

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*Innovation to meet the global need for sustainable water resources*

## **Microbial DESalination (MIDES) launches project to build world's largest demonstration of a low-energy system to produce drinking water**

The MIDES project aims to revolutionise desalination by developing a more sustainable low-energy process of producing safe drinking water from seawater. This advanced technology will be exploited internationally to meet the growing need for water resources essential to environmental, economic and social development. Demonstration sites are planned in Europe, North Africa and South America.

In the MIDES system, **Microbial Desalination Cells (MDC)** remove ions from saline water in a process powered by electroactive bacteria, without external energy input – as a pretreatment for reverse osmosis. The € 7.9 million project, co-financed by the **EU Horizon 2020** programme, comprises an international consortium of 12 companies and research organisations from 8 countries, and is planned to run from 2016 - 2020. Led by FCC Aqualia, the work will start with the validation of new nanomaterials for pre-treatment, as well as the selection of new membrane and electrode configurations.

**The need for innovation:** Desalination of seawater with lower energy requirements is key to future water resources for growing populations in changing climate conditions. Reverse osmosis is the most widely used desalination technology, but its energy consumption is 10 times higher than conventional resources. MIDES can make desalination more sustainable with efficient electroactive bacteria to convert organic matter into electrical current to favour ion migration.

### **Desalination energy threshold by the European Commission call**

Target desalination energy requirement	Below 1 kWh/m <sup>3</sup>
Current alternative systems	At least 2.5 kWh/m <sup>3</sup>
<b>MIDES energy requirement aim</b>	<b>Below 0.5 kWh/m<sup>3</sup></b>

Launched in April 2016, the MIDES project was presented in June at the International Water Association conference on Leading Edge Technologies in Jerez de la Frontera, Spain, as part of the “Sustainable Desalination” session chaired by Maria Kennedy of UNESCO-IHE. Simultaneously, the first project deliverables were completed, with specifications on cathode and configurations, and ion exchange membranes – and the project website [www.midesh2020.eu](http://www.midesh2020.eu) is now online.

### **For more information on the MIDES project, contact:**

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### **The MIDES Consortium**

Aqualia ( <i>Coordinator</i> )	RWB water services
FUJIFILM	SGL Group
IMDEA Water	SimTech
LEITAT	UNESCO-IHE
Mikrolin	University of Chile
Oncontrol	University de Gabes



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