



Sixsenso becomes ICFO's 9th Spin-off

New spin-off to contribute to better care of the environment

October 13, 2020

On October 20th, ICFO launched its 9th spin-off company, Sixsenso. The official signature took place in Barcelona with members of the spin-off company, Sixsenso's CTO Pedro Martinez and CEO Adrian Parker, ICREA Professor at ICFO and co-founder Valerio Pruneri, as well as ICFO Director Lluís Torner, ICREA Executive Director Emilia Pola, and ICFO's Knowledge and Technology Transfer Director Silvia Carrasco.

The technology and IP developed at ICFO in the Optoelectronics research group led by ICREA Prof. Valerio Pruneri, which has now been transferred to Sixsenso, is based on the application of light to detect fluorescence emitted both naturally and by induced labelling techniques emitted by microorganisms. It comprises a microfluidic labelling system and a laser-based fluorescence reader system, both coupled to a front-end sample concentrator system that takes the target waters under investigation and converts them into a useful volume for system analysis.

The complete Sixsenso system is designed to be extremely accurate, portable, cost-effective, and easy to integrate within a process stream or for on-site measurements with a time to result one order of magnitude lower than gold standard methods. It is an innovative solution for early detection of biological contamination in environmental and industrial waters to monitor the water quality and avoid and stop outbreaks. It is suitable for bathing water, harbor water and ballast water regulations compliance, with direct applicability in waste water, industrial water, fresh water, beverage quality control.

Sixsenso incubated in the KTT Launchpad for over eight years, during which time the technology evolved through several research and innovation projects. These projects have produced validations of the technology in water testing and provided a foundation for the business development direction.

The incubation has received support from the Government of Catalonia, the Ministry of Economy, Industry and Competitiveness of Spain, the Barcelona City Council and the Castelldefels City Council, ACCIO under the Programme Ajuts destinats a incentivar els projectes de creació d'empreses de base tecnològica de les universitats, instituts de recerca hospitalari, centres tecnològics i altres centres de recerca amb una unitat de comercialització tecnològica (SixSenso-Water, VALUNI16-1-0083 and IMACYT, 2014 PROD 00069) and the European Union's Horizon 2020 research and innovation programme under grant agreement 642356 (CYTO-WATER).

Pedro Martinez, Sixsenso's CTO comments, **“Detecting and counting bacteria in environmental water is something challenging and exciting. I have been involved for eight years in Sixsenso, starting in the early stages of the project, and I still get excited each time I see a fluorescence peak signal on the screen detecting the target microorganism. Now the technology is ready to enter in the water market and offer an innovative and attractive solution for end-users in terms of functionality, reliability and rapid time to result. This milestone has only been possible due to the tremendous effort of those people who, during these years contributed with great ideas and hard work, including the immense and highly professional support of the KTT unit and the Mechanical and Electronics Workshops. There are new challenges on the horizon but we are encouraged to meet them as a company fully committed to present cutting-edge technology addressing environmental needs.”**

Adrian Parker, the company's CEO adds, **“Our Philosophy is 'We embrace challenge and we do not accept boundaries to the development of our science'. The company is developing technology that will push the boundary of laboratory test to field test, bringing cutting-edge technology to environmental water testing and in doing so, creating a better environment. Sixsenso recognizes the immense effort deployed to arrive at its current position. We are a**

I privileged to be caretakers to move the business forward.

Director of ICFO KTT, Silvia Carrasco comments, **We are thrilled to see Sixsenso entering the club of ICFO spin-offs after years of intense and creative research, development and business efforts. Hand in hand with the KTT Business developers Sergi Ferrando and Ziad Moubarak, all the Sixsenso team has managed to bring this ICFO's technology to society. Sixsenso aims to contribute to better care of the environment.**



Sixsenso Stakeholders (L to R) V. Pruneri, A. Ongaro, P. A. Martinez, A. Parker, S. Carrasco, L. Torner, and E. Pola (ICREA)



SX-CYT fluorescence reader prototype