

POSITIVE NEWSLETTER 1: NEW PHOTONIC BIOSENSORS FOR THE FAST AND SAFE DETERMINATION OF SENSITIZATION TO MULTIPLE FOOD ALLERGENS

Six European research centres and two industry partners have joined in a new European research consortium called POSITIVE. The goal of POSITIVE is to develop new rapid and multi-assay diagnostics for determining sensitization to food allergens. The European Union supports the consortium during a three-year period with 2.9 MEuro through its Seventh Framework Programme.

Food allergies can provoke clinical reactions whose most severe is anaphylaxis, with respiratory and/or cardiovascular problems that might result in death. They are common in 1-2% of adults and up to 8% of children, corresponding to a serious public health problem that affects over **15 million people in Europe** from infants to the elderly and its prevalence is increasing.

POSITIVE will develop a diagnostic platform that can quickly and safely identify the sensitization of a patient to multiple food allergens so as to be able to proscribe a suitable diet and lifestyle. Ideally it will be a rapid system with little hands-on time, so as to be used at point of care (PoC) in an intensive care unit by paramedics.

The consortium will develop a state-of-the-art diagnostics Lab-on-a-Chip platform via an integrated microfluidic sample preparation technique capable of serum preparation from whole blood of volumes, <100µl. The detection will be based on ultrasensitive photonic biosensors that are integrated into the lab-on-chip device. A final prototype consisting of a packaged biochip and reader will be used on clinical samples in order to determine sensitization to allergens such as that for hen's eggs, cow's milk, peanuts, wheat, tree nuts, fish, sesame, and shrimp ingestion.

More information about POSITIVE and its partners can be found on the POSITIVE website <http://www.positive.eu> or in the attached project flyer.

ABOUT THE POSITIVE CONSORTIUM:

Positive project manager and main contact person:

Dr. Daniel Hill, UVEG – Universitat de Valencia (<http://www.uv.es/umdo>)

Other partners:

Royal Institute of Technology - Microsystem Technology Lab (<http://www.ee.kth.se/mst>)

Centre Suisse d'Electronique et de Microtechnique (<http://www.csem.ch>)

Farfield Group Ltd (<http://www.farfield-scientific.com/>)

Charite Universitaetsmedizin Berlin (<http://www.charite.de>)

Phylogene SA (<http://www.phylogene.com>)

Università degli Studi Di Trento (<http://science.unitn.it/~semicon/>)

Consiglio Nazionale Delle Ricerche (<http://www.icrm.cnr.it>)

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