Exploring the diagnostics market for simple and fast point-of-care antibody detection

Fact Sheet

Project Information

ABSENS

Grant agreement ID: 632274

Project closed

Start date
1 September 2014

End date
31 August 2015

Funded under
Specific programme: "Ideas" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Total cost
€ 150 000,00

EU contribution
€ 150 000,00

Coordinated by
TECHNISCHE UNIVERSITEIT EINDHOVEN
Netherlands

Objective

Antibody detection assays are used in many fields of biomedicine including the diagnosis of infectious diseases, autoimmune diseases and allergies. Current analytical techniques for antibody detection come with intrinsic limitations such as the requirement for multiple time-consuming incubation steps, multiple reagents, and/or

sophisticated equipment. Supported by an ERC consolidator grant we have developed a highly modular sensor concept for antibody-responsive reporter enzymes (AbSens) that addresses many of these challenges. Key advantages include the ability to monitor antibodies directly in solution, easy read-out based on a simple color reaction, adaptability to target any antibody of interest, and high affinity and specificity. We believe that this generic sensor platform could find applications in low-cost point-of-care diagnostics, clinical research, and the development of therapeutic antibodies.

The goal of AbSens is to identify those opportunities in the huge market of antibody-based diagnostics where our sensor platform provides unique advantages over existing technologies, both in terms of analytical performance and economics.

To enable the next step towards commercialization, the analytical performance of our technology will be compared to current gold standards using relevant clinical samples in collaboration with commercial parties and clinicians. Other commercially important parameters are the long-term stability of the assay components and the development of a yeast-based production system to lower the cost of enzyme production. Based on an in-depth market analysis and the feedback we receive from external stakeholders on the performance of our technology, a realistic strategy will be developed for the further commercialization. In anticipation of exploring the commercialization of our AbSens technology we filed a US provisional patent application in Sept. 2012 on the key underlying technology, which was recently continued via the PCT route.

Fields of science (EuroSciVoc)

medical and health sciences > health sciences > **infectious diseases**

medical and health sciences > basic medicine > immunology > **autoimmune diseases**

engineering and technology > electrical engineering, electronic engineering, information engineering > electronic engineering > **sensors**

medical and health sciences > clinical medicine > **allergology**

natural sciences > biological sciences > biochemistry > biomolecules > proteins > **enzymes**

Programme(s)

FP7-IDEAS-ERC - Specific programme: "Ideas" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to

2013)

Topic(s)

ERC-OA-2013-PoC - European Research Council ERC Proof of Concept

Call for proposal

ERC-2013-PoC
See other projects for this call

Funding Scheme

CSA-SA(POC) - Supporting action (Proof of Concept)

Host institution

TECHNISCHE UNIVERSITEIT EINDHOVEN

EU contribution

€ 150 000,00

Total cost

No data

Address

GROENE LOPER 3
5612 AE Eindhoven
Netherlands

Region

Zuid-Nederland > Noord-Brabant > Zuidoost-Noord-Brabant

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Beneficiaries (1)

TECHNISCHE UNIVERSITEIT EINDHOVEN

Netherlands

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