Bio-sensor for Effective Environmental Protection and Commercialization - ENhanced

Fact Sheet

Project Information

<table>
<thead>
<tr>
<th>Grant agreement ID: 232082</th>
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<tbody>
<tr>
<td>Funded under FP7-SME</td>
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<tr>
<td>Status</td>
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<tr>
<td>Closed project</td>
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<tr>
<td>Start date</td>
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<tr>
<td>1 October 2009</td>
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<td>End date</td>
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<tr>
<td>30 September 2011</td>
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<tr>
<td>Overall budget</td>
</tr>
<tr>
<td>€ 1 382 718,41</td>
</tr>
<tr>
<td>EU contribution</td>
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<tr>
<td>€ 1 044 837</td>
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<tr>
<td>Coordinated by</td>
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<tr>
<td>BIOSENSOR SRL</td>
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<tr>
<td>Italy</td>
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Objective

The objective of BEEP-C-EN is the integration of innovative biosensor research and technology and their exploitation by industry and/or other socio-economic entities in the fields of environment and agro-industry. The first target application is the detection of pesticides, heavy metal and organic compounds in water. The aim is building up a biosensor modular industrial platform, which can be easily adopted for multi-parameter/multi-sensor design and production. It consists of a series of electrochemical-optical sensors and microsystems suitable for various biomediators (microrganisms, DNA, proteins or cells) and based on new technologies studied and developed by the research performers in the consortium. The transduction approach is suggested by two main biomediator properties, often exploited in biosensor operation in response to analyte or modification of a physical-chemical condition: the variation of the bioluminescence/fluorescence emission and the internal electrical behaviour. These changes when transduced to readable electrical signals can give
complementary information: the modification of a current signal is correlated to the
electrogenic property of the biomediator (e.g. inhibition of Photosystem II electron
transfer in the presence of a pesticide), while a modification of fluorescence is often
correlated to a conformational modification (e.g. interaction of Photosystem II protein
with ionizing radiation). The specific proposed devices are: 1) MultiLights: modular
optical transducer for autonomous measurements of bioluminescence/fluorescence
of several biomediators assembled in series; 2) MultiAmps: modular electrochemical
transducer for measurements of current and voltage variations; 3) MultiTasks: a
multitransduction biosensor based on simultaneous and autonomous measurement
either of bioluminescence either of current variations.

Field of science
/natural sciences/chemical sciences/organic chemistry
/natural sciences/biological sciences/biochemistry/biomolecules/proteins
/engineering and technology/environmental biotechnology/biosensing

Programme(s)

Topic(s)

Call for proposal
FP7-SME-2008-1

Funding Scheme
BSG-SME - Research for SMEs

Coordinator

BIOSENSOR SRL
Address
Via Degli Olmetti 44
00060 Formello
Italy

Activity type
Private for-profit entities
(excluding Higher or
Secondary Education
Establishments)

EU contribution
€ 393 156

Website
Contact the organisation
Administrative Contact
Giovanni Basile (Dr.)
Participants (7)

METROHM DROPSSENS SL
- Spain
- EU contribution: € 334 500

Address:
Calle Colegio Santo Domingo De Guzman
33010 Oviedo

Activity type:
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Website:
Contact the organisation

Administrative Contact:
David Hernandez-Santos (Dr.)

BIO-LOGIC SCIENCE INSTRUMENTS LTD
- United Kingdom
- EU contribution: € 250 389

Address:
Pinewood Court Larkwood Way Tytherington Business SK10 2XR Macclesfield Cheshire

Activity type:
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Website:
Contact the organisation

Administrative Contact:
Graham Robert Johnson (Dr.)

CONSIGLIO NAZIONALE DELLE RICERCHE
- Italy
- EU contribution: € 8 552

Address:
Piazzale Aldo Moro 7 00185 Roma

Activity type:
Research Organisations

Website:
Contact the organisation

Administrative Contact:
Francesca Verqari (Dr.)
<table>
<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
<th>EU contribution</th>
<th>Address</th>
<th>Activity type</th>
<th>Website</th>
<th>Administrative Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSITE DE PERPIGNAN</td>
<td>France</td>
<td>€ 9,600</td>
<td>Avenue Paul Alduy 52 66860 Perpignan</td>
<td>Higher or Secondary Education Establishments</td>
<td></td>
<td>Rose-Marie Campus (Dr.)</td>
</tr>
<tr>
<td>AIRBUS DEFENCE AND SPACE GMBH</td>
<td>Germany</td>
<td>€ 15,200</td>
<td>Willy-messerschmitt-strasse 1 82024 Taufkirchen</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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<td>Peter Lilischkis (Mr.)</td>
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<tr>
<td>VITENS NV</td>
<td>Netherlands</td>
<td>€ 14,400</td>
<td>Oude Veerweg 1 8019 BE Zwolle</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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<td>E.H. Veenstra (Dr.)</td>
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**RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU**

**Netherlands**

**EU contribution**

**€ 19 040**

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<th>Address</th>
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<tr>
<td>Antonie Van</td>
<td>Research Organisations</td>
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<tr>
<td>Leeuwenhoeklaan 9</td>
<td></td>
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<tr>
<td>3721 MA Bilthoven</td>
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**Website [link](#)**

**Administrative Contact**

**Ben Tangena (Mr.)**

**Last update:** 1 August 2019

**Record number:** 92746

**Permalink:** [https://cordis.europa.eu/project/id/232082/](https://cordis.europa.eu/project/id/232082/)

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