Integrated whole blood acoustophoresis and homogeneous nucleic acid detection cartridge for rapid sepsis diagnostics

Fact Sheet

Project information

**ACUSEP**

Grant agreement ID: 259848

Status

Closed project

Start date 1 December 2010  
End date 31 May 2014

Funded under:

FP7-HEALTH

Overall budget:

€ 3 747 480

**EU contribution**

€ 2 870 410

Coordinated by:

TURUN YLIOPISTO

Finland

Objective

The objective of the ACUSEP research project is to develop an integrated, dry-reagent based disposable ready-to-use cartridge enabling rapid analysis of sepsis-causing organisms and eventual identification of antibiotic resistance directly from suspected blood samples. Sepsis causes annually up to 135 000 deaths in Europe and the early diagnosis is the key to improved survival. Identification of the antibiotic resistance is further beneficial to fast initiation of proper antimicrobial treatment. The rapid diagnostics of sepsis and identification of the causative pathogens can be achieved by research utilizing the recent technological advances; combining acoustophoretic collection of the pathogens from whole blood and photoluminescent dual-tag probe-pair detection technology with nucleic acid amplification providing excellent sensitivity and speed needed in acute diagnostics. The consortium is assembled to cover all the key research areas of the project. It consists of academic research organizations with significant technical and scientific experience of acoustophoretic target organism collection and purification, nucleic acid amplification, photoluminescent reporters and multiplexed homogeneous probe detection technologies. The project will proceed in phases, divided to both parallel and serial tasks in collaboration with SME and clinical partners involved, to perform a clinical evaluation of the developed prototype consumable assay cartridge and to initiate further exploitation activities. The specific objective in FP7 HEALTH-2010 addressed to is to
develop detection and analytical tools and technologies for diagnosis, monitoring and prognosis of diseases.

Field of Science

/natural sciences/biological sciences/biochemistry/biomolecules/nucleic acid

/medical and health sciences/basic medicine/pharmacology and pharmacy/drug resistance/antibiotic resistance

Programme(s)

FP7-HEALTH - Specific Programme "Cooperation": Health

Topic(s)

HEALTH.2010.1.2-1 - Tools for the identification and the detection of biomarkers in clinical samples and patients. FP7-HEALTH-2010-two-stage.

Call for proposal

FP7-HEALTH-2010-two-stage

See other projects for this call

Funding Scheme

CP-FP - Small or medium-scale focused research project

Coordinator

TURUN YLIOPISTO

Address

Yliopistonmaki
20014 Turku
Finland

Activity type

Higher or Secondary Education Establishments

EU Contribution

€ 1 126 690

Website

Contact the organisation

Administrative Contact
Eliisa Särkilahti (Dr.)

Participants (4)
<table>
<thead>
<tr>
<th>Organisation</th>
<th>EU Contribution</th>
<th>Country</th>
<th>Address</th>
<th>Activity type</th>
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<tbody>
<tr>
<td><strong>LUNDS UNIVERSITET</strong></td>
<td>€ 970 290</td>
<td>Sweden</td>
<td>Paradisgatan 5c, 22100 Lund</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
<tr>
<td><strong>UNIVERSIDAD AUTONOMA DE MADRID</strong></td>
<td>€ 461 350</td>
<td>Spain</td>
<td>Calle Einstein 3 Ciudad Univ Cantoblanco Rectorado, 28049 Madrid</td>
<td>Higher or Secondary Education Establishments</td>
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<tr>
<td><strong>VARSINAIS-SUOMEN SAIRAANHOITOPIIRIN KUNTAYHTYMA</strong></td>
<td>€ 146 820</td>
<td>Finland</td>
<td>Kiinamyllynkatu 4-8, 20520 Turku</td>
<td>Research Organisations</td>
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<td>ABACUS DIAGNOSTICA OY</td>
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<tr>
<td>Tykistokatu 4d</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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<td>20520 Turku</td>
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</tr>
</tbody>
</table>

**Website**<br>
**Contact the organisation**

Administrative Contact<br>
Plia Von Lode (Dr.)

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**Last update:** 1 August 2019

**Record number:** 97060

**Permalink:** https://cordis.europa.eu/project/id/259848/en

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