Innovative in-line Raman analytical sensor for new upstream cell culture monitoring and quality control

Fact Sheet

Project Information

CELLUP

Grant agreement ID: 779218

Project website

DOI
10.3030/779218

Project closed

EC signature date
7 July 2017

Start date
1 August 2017

End date
31 December 2019

Funded under
SOCIETAL CHALLENGES - Health, demographic change and well-being

Total cost
€ 1 969 553,75

EU contribution
€ 1 969 553,75

Coordinated by
RESOLUTION SPECTRA SYSTEMS
France

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Objective

The main objective of the CellUp business innovation project is to develop and commercialize the new disruptive in-line
analytics sensor for upstream cell culture process that the biopharmaceutical industry needs for the quality and process
control during the phases of process development, scale-up and manufacturing of vaccines and antibodies for human
medicines based on eukaryote cells culture.
This new bioprocess analyser will be the first industrial sensor able to perform in-line quantification of the main nutrients and
metabolites during the mammalian cell culture inside the bioreactor.
Today, cell cultures in bioreactors are only monitored in real time with temperature, PH and Oxygen density sensors. The
negative consequences of such a limited control are huge in terms of batch failures, time consumed at each scale-up phase
and in terms of untapped production yield improvement.
Our company, with its unique integrated SWIFTS technology has the opportunity to fix the above described problem by
offering a high performance miniaturized in-line Raman analyzer which can be implemented as an industrial GMP sensor.
Based on the needs expressed by several major industrial actors, the company has already developed a first product
successfully evaluated and released end of 2016 under the name ProCellics.
The objective of the CellUp project is to go a step further in the integration of the Raman analyser thanks to a new
configuration of our technology, called SWITS-CD. We will also develop a new “standard addition method” technology and a
related software to provide an easy and robust way to implement the monitoring of the cell culture. The key to the success of
this new methodology development is a cell culture activity carried internally by our company.

The total accessible market is estimated at 750 M€ for a first equipment of the 20,000 biopharma industry bioreactors, allowing the emergence of a European leader with more than 300 job creation over 10 years.

Fields of science (EuroSciVoc)

natural sciences > computer and information sciences > **software**

engineering and technology > environmental biotechnology > bioremediation > **bioreactors**

social sciences > sociology > industrial relations > **automation**

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

natural sciences > physical sciences > optics > **spectroscopy**

Programme(s)

H2020-EU.3.1. - SOCIETAL CHALLENGES - Health, demographic change and well-being

MAIN PROGRAMME

H2020-EU.3.1.3. - Treating and managing disease

Topic(s)

SMEInst-05-2016-2017 - Supporting innovative SMEs in the healthcare biotechnology sector

Call for proposal

H2020-SMEInst-2016-2017

See other projects for this call

Sub call

H2020-SMEINST-2-2016-2017

Funding Scheme

SME-2 - SME instrument phase 2

Coordinator

RESOLUTION SPECTRA SYSTEMS

Net EU contribution

€ 1 969 553,75

Total cost

€ 1 969 553,75

Address

13 CHEMIN DU VIEUX CHENE
38240 MEYLAN
France

SME

Yes

Region

Auvergne-Rhône-Alpes > Rhône-Alpes > Isère

Activity type

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

Links

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

Last update: 16 August 2022

Permalink: https://cordis.europa.eu/project/id/779218

European Union, 2025