**Objective**

Poly(lactic acid) (PLA) is a compostable polymer derived from renewable food-derived sources (mainly starch and sugar beet) and possesses the highest potential for a commercial major scale production of renewable packaging materials. Since PLA is compostable and derived from sustainable sources, it can be envisaged as a promising material for the reduction of the enormous societal problems associated to solid waste disposal.

ECLIPSE promotes a more sustainable and environmentally friendly approach to packaging, via the use of waste derived materials unrelated to fossil fuels and to the food chain. The main objective of ECLIPSE is to revalorize waste-derived products (algae biomass waste and plant and crustacean wastes) into novel packaging materials. The ECLIPSE approach intends to revalorize waste materials for the production of an algae-derived PLA matrix. In addition, ECLIPSE also seeks to reinforce such PLA matrix with functionalized nanofillers extracted from non-edible...
reinforce such PLA matrix with functionalized nanofillers extracted from non-edible banana plant, almond shell and crustacean shell wastes. This project aims at decreasing both the production costs of both poly(lactic acid) and algae biodiesel, by increasing the added value of algae waste via its revalorisation into the production of lactic acid.

To this purpose, the industrial partnership was designed to combine leading companies to supply the raw materials involved in the project, namely algae (ALGAENERGY), lactic acid (GALACTIC), PLA (FUTERRO), banana waste (BANACOL) and seafood waste (ANTARTIC), with sound research groups active on biopolymers and nanoparticle functionalisation and dispersion (UMONS, CIDETEC, FRAUNHOFER, LTU, UPV/EHU, UPB, PUC) and a global end user with multiple plastic packaging converting facilities. This consortium includes 9 partners from European institutions and 4 partners from South American SICA countries, all of them experts in their respective fields.

Field of science
/engineering and technology/industrial biotechnology/biomaterials/bioplastics/polylactic acid

Programme(s)

Topic(s)

Call for proposal
FP7-NMP-2011-SMALL-5

Funding Scheme
CP-FP-SICA - Small/medium-scale focused research project for specific cooperation actions dedicated to international cooperation partner countries(SICA)

Coordinator

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<th>FUNDACION CIDETEC</th>
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<th>EU contribution</th>
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<td>Paseo Miramon 196 Parque Tecnologico De Miramon</td>
<td>Research Organisations</td>
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## Participants (12)

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<th>EU contribution</th>
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<td>UNIVERSITE DE MONS</td>
<td>€ 296 967</td>
<td>Place Du Parc 20, 7000 Mons</td>
<td>Higher or Secondary Education Establishments</td>
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<td>UNIVERSIDAD PONTIFICIA BOLIVARIANA Corporacion sin animo de lucro - UPB</td>
<td>€ 239 370</td>
<td>Circular - Laureles 1 - N70, Medellin</td>
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<td>UNIVERSIDAD DEL PAIS VASCO/ EUSKAL HERRIKO UNIBERTSITATEA</td>
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<td>PONTIFICIA UNIVERSIDAD CATOLICA DE CHILE</td>
<td>Chile</td>
<td>€ 221 600</td>
<td>Avenida Libertador Bernardo O'higgins 340 8331150 Santiago</td>
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<tr>
<td>LULEA TEKNISKA UNIVERSITET</td>
<td>Sweden</td>
<td>€ 425 256</td>
<td>Universitetsomradet Porson 971 87 Lulea</td>
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<td>FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.</td>
<td>Germany</td>
<td>€ 382 535</td>
<td>Hansastrasse 27C 80686 Munchen</td>
</tr>
</tbody>
</table>
Walter Krause (Mr.)

**FUTERRO**

Belgium

**Address**
Rue Du Renouveau 1
7760 Escanaffles

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

Contact the organisation

Administrative Contact
Philippe Coszach (Mr.)

**ALGAENERGY SA**

Spain

**EU contribution**
€ 164 190

**Address**
Avenida De Europa 19
28108 Alcobendas Madrid

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

Website

Contact the organisation

Administrative Contact
Jose Maria Ortega (Mr.)

**COMERCIALIZADORA INTERNACIONAL BANACOL DE COLOMBIA SA**

Colombia

**EU contribution**
€ 145 877

**Address**
Calle 26 Sur 48 12
11842 Envigado

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

Website

Contact the organisation

Administrative Contact
Luis Osorio (Mr.)
**ANTARCTIC SEAFOOD SA**

Chile

EU contribution € 108,900

Address
Avenida Geronimo Mendez
1610
Coquimbo

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

Website [Contact the organisation]

Administrative Contact
Mario Venegas (Mr.)

---

**GALACTIC SA**

Belgium

EU contribution € 408,432

Address
Place D’escanaffles 23
7760 Escanaffles

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

Website [Contact the organisation]

Administrative Contact
Benoît Moreau (Dr.)

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**BIOPAC (UK) LIMITED**

United Kingdom

EU contribution € 171,765

Address
Aintree Road Units 19 & 20
Keytec Business Park
WR10 2JN Pershore

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

Website [Contact the organisation]

Administrative Contact
Eric Graham (Mr.)