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Development of a bioartificial pancreas for type I diabetes therapy

Fact Sheet

Project Information

BARP+

Grant agreement ID: 505614

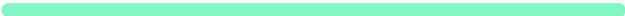
Project closed

Start date

1 January 2004

End date

31 December 2006



Funded under

Nanotechnologies and nanosciences, knowledge-based multifunctional materials and new production processes and devices: thematic priority 3 under the 'Focusing and integrating community research' of the 'Integrating and strengthening the European Research Area' specific programme 2002-2006.

Total cost

€ 3 622 479,00

EU contribution

€ 2 495 600,00

Coordinated by

CENTRE EUROPEEN D'ETUDES
DU DIABETE

 France

This project is featured in...

Natural disasters and climate change: how science expects the unexpected

Objective

Four to five million people in Europe and about 80 million worldwide suffer from type 1 diabetes (insulin-dependent), characterized by a deficiency in insulin secretion resulting in hyperglycaemia responsible for debilitating long-term complications (coronary diseases, acquired blindness, chronic renal failures). Recently developed immunosuppressive protocols improved the success of humanallogenic pancreatic islets transplantation. However, such transplantation has severe limitations: the number of available donors and the potential toxicity of the immunosuppressive treatments. To avoidimmunosupression, islets could be encapsulated to protect them from the attack of the immune system and thus from rejection.

This project intends to develop, improve and validate an efficient reliablebioartificial pancreas for human application. To achieve this ambitious goal, various disciplines reintegrated in a true task force of basic and clinical researchers with leading expertise in experimental diabetes and advanced modern material technologies to develop an effective approach for the treatment of type 1 diabetes. The proposed approach takes into account the far-reaching advances in the modernnanosize technology, which are of utmost importance for the success of this challenge. To canny out the project to a successful achievement, the consortium gathers a multidisciplinary group of leading European scientists with complementary competencies, spending from biomaterials to tissue engineering, and high-tech Sees. This transactional approach provides convincing solutions to bypass the limitations of traditional treatments of this disease. That proposal fits perfectly within the scope of Priority Nan technologies and Nan sciences, 3.4.1 in particular Biotechnologies-biotechnologies, 3.4.1.2.Furthermore the proposal addressed also the 3.4.1.5 Application in areas such as health and medical systems, chemistry, energy, optics, food and environment.

[medical and health sciences](#) > [medical biotechnology](#) > **[tissue engineering](#)**

[medical and health sciences](#) > [clinical medicine](#) > [endocrinology](#) > **[diabetes](#)**

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Keywords

[Artificial Organs](#)

[Biotechnology](#)

[Cell & Tissue Engineering](#)

[Diabetes](#)

[Medical Device](#)

[Molecular#](#)

Programme(s)

[FP6-NMP - Nanotechnologies and nanosciences, knowledge-based multifunctional materials and new production processes and devices: thematic priority 3 under the 'Focusing and integrating community research' of the 'Integrating and strengthening the European Research Area' specific programme 2002-2006.](#)

Topic(s)

[NMP-2002-3.4.1.2-1 - Interfaces between biological and non biological entities](#)

[NMP-2002-3.4.1.5-2 - Applications in the field of energy and chemistry, with focus on catalysis](#)

Call for proposal

FP6-2002-NMP-1

[See other projects for this call](#)

Funding Scheme

[STREP - Specific Targeted Research Project](#)

Coordinator



CENTRE EUROPEEN D'ETUDES DU DIABETE

EU contribution

No data

Total cost

No data

Address

**Hopitaux Universitaires de Strasbourg, Boulevard Rene Leriche
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 France 

Participants (13)



ASSOCIATION POUR LES TRANSFERTS DE TECHNOLOGIE DU MANS

 France

EU contribution

No data

Address

**20 Rue de Thales de Milet
LE MANS** 

Total cost

No data



BAYERISCHE JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG

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EU contribution

No data

Address

**Sanderring 2
WUERZBURG** 

Total cost

No data



CELL CONCEPTS GMBH

 Germany

EU contribution

No data

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Mundenhofer Weg 28

UMKIRCH 

Total cost

No data



CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

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EU contribution

No data

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Rue Michel Ange 3

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Total cost

No data



EMPRESA DE CONSULTORIA EM BIOTECNOLOGIA LDA

 Portugal

EU contribution

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Total cost

No data



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EU contribution

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Total cost

No data



ISTITUTO DI RICERCHE FARMACOLOGICHE "MARIO NEGRI"

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EU contribution

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MILANO 

Total cost

No data



ISTITUTO NAZIONALE PER LA FISICA DELLA MATERIA

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EU contribution

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GENOVA 

Total cost

No data



MEDIZINISCHE HOCHSCHULE HANNOVER

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EU contribution

No data

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Total cost

No data



STATICE SANTE SA

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EU contribution

No data

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BESANCON 

Total cost

No data



UNIVERSITA DEGLI STUDI DI PISA

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EU contribution

No data

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Via Lungarno Pacinotti 43
PISA 

Total cost

No data



UNIVERSITE CATHOLIQUE DE LOUVAIN

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EU contribution

No data

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LOUVAIN-LA-NEUVE 

Total cost

No data



UNIVERSITE LIBRE DE BRUXELLES

 Belgium

EU contribution

No data

Address

Avenue Franklin Roosevelt 50

BRUXELLES 

Total cost

No data

Last update: 2 July 2007

Permalink: <https://cordis.europa.eu/project/id/505614>

European Union, 2025