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Identification and validation of novel drug targets in Gram-negative bacteria by global search: a trans-system approach

Fact Sheet

Project Information

ANTIPATHOGN

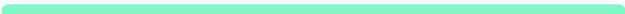
Grant agreement ID: 223101

[Project website](#) 

Project closed

Start date
1 February 2009

End date
31 July 2013



Funded under
Specific Programme "Cooperation": Health

Total cost
€ 7 692 588,01

EU contribution
€ 5 943 961,00

Coordinated by
UNIVERSITAT AUTONOMA DE BARCELONA
 Spain

This project is featured in...

**Infectious diseases:
international leadership
tackling major health
concerns**

Objective

Multi-drug-resistant bacterial infections are increasing at an alarming pace in both developing and developed countries and in both community and nosocomial settings. The few antimicrobial agents that have been launched during the last decade (e.g. linezolid, daptomycin) have a good activity against Gram-positive bacteria. However, multi-drug-resistant bacteria are often found among the Gram-negative group. To tackle this problem, the AntiPathoGN project proposes a novel strategy for the discovery of new antimicrobial drug targets in a number of Gram-negative bacteria. This strategy is based on a comparative, system-level analysis of molecular processes involved in pathogenicity, drug resistance, cell division and/or growth of selected pathogenic Gram-negative bacteria through a combination of computational biology, interactome discovery, in-vivo protein-blocking and structural biology techniques. This comparative analysis, at one organization level above genomics, shall permit the discovery of new potential drug targets, relevant to both species-specific and broad-spectrum antimicrobial strategies. In addition, the AntiPathoGN project will pursue the identification of novel antibacterial compounds acting against previously validated targets by screening purpose-specific libraries of products derived from natural resources and from synthetic compounds. An important aspect of the project is that more than one approach is planned for the key objectives of target identification, target validation, target characterisation, and hit finding. The AntiPathoGN consortium is composed of 1 university bringing expertises in computational biology and microbiology, 3 research centres with expertises in computational and experimental interactomics, structural biology and clinical microbiology, and 7 SMEs with records on recombinant-antibody technology, structural biology, drug discovery and clinical research. The AntiPathoGN project fully addresses topic HEALTH-2007-2.3.1-1.

Fields of science (EuroSciVoc)

[medical and health sciences](#) > [basic medicine](#) > [pharmacology and pharmacy](#) > [drug discovery](#)

[natural sciences](#) > [biological sciences](#) > [microbiology](#) > **[bacteriology](#)**.

[medical and health sciences](#) > [clinical medicine](#) > **[clinical microbiology](#)**.

[medical and health sciences](#) > [basic medicine](#) > [pharmacology and pharmacy](#) > **[drug resistance](#)**

[natural sciences](#) > [biological sciences](#) > [molecular biology](#) > **[structural biology](#)**.



Keywords

[Interactomics](#)

[antibody technology](#)

[clinical microbiology](#)

[computational biology](#)

[drug discovery](#)

[structural biology](#)

[target discovery](#)

Programme(s)

[FP7-HEALTH - Specific Programme "Cooperation": Health](#)

Topic(s)

[HEALTH-2007-2.3.1-1 - Novel targets for drugs against Gram negative bacteria](#)

Call for proposal

FP7-HEALTH-2007-B

[See other projects for this call](#)

Funding Scheme

[CP-FP - Small or medium-scale focused research project](#)

Coordinator



UNIVERSITAT AUTONOMA DE BARCELONA

EU contribution

€ 966 819,00

Total cost

No data

Address

EDIF A CAMPUS DE LA UAB BELLATERRA Cerdanyola V
08193 Cerdanyola Del Valles

 Spain 

Region

Este > Cataluña > Barcelona

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (10)



FUNDACIO INSTITUT DE RECERCA BIOMEDICA (IRB BARCELONA)

 Spain

EU contribution

€ 744 320,00

Address

CARRER BALDIRI REIXAC 10-12 PARC SCIENTIFIC DE BARCELONA
08028 Barcelona 

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



RPS RESEARCH IBERICA SL

 Spain

EU contribution

€ 419 865,72

Address

VIA AUGUSTA 21-23

08006 BARCELONA 

Activity type

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

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



MICROBIONTA, S.L. 

 Spain

EU contribution

€ 533 273,00

Address

Ronda de Poniente - Bajo C-D 4

ES28760 Tres Cantos 

Activity type

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

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



PROTEROS BIOSTRUCTURES GmbH

 Germany

EU contribution

€ 848 840,00

Address

AM KLOPFERSPITZ 19
82152 MARTINSRIED 

Activity type

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

Links

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[HORIZON collaboration network](#) 

Total cost

No data



InterMed Discovery GmbH 

 Germany

EU contribution

€ 471 063,60

Address

Otto-Hahn-Strasse 15
D-44227 Dortmund 

Activity type

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

Links

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[HORIZON collaboration network](#) 

Total cost

No data



BIO-XTAL SARL

 France

EU contribution

€ 541 040,00

Address

ROUTE DE LA CHAPELLE 227
74540 ST FELIX 

Activity type

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

Links

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Total cost

No data



FUNDACIO DE RECERCA CLINIC BARCELONA-INSTITUT D INVESTIGACIONS BIOMEDIQUES AUGUST PI I SUNYER

 Spain

EU contribution

€ 356 720,00

Address

CARRER ROSSELLO 149
08036 Barcelona 

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

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[HORIZON collaboration network](#) 

Total cost

No data



DEUTSCHES KREBSFORSCHUNGSZENTRUM HEIDELBERG

 Germany

EU contribution

€ 698 879,00

Address

IM NEUENHEIMER FELD 280
69120 Heidelberg 

Region

Baden-Württemberg > Karlsruhe > Heidelberg, Stadtkreis

Activity type

Research Organisations

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



ANAXOMICS BIOTECH SL

 Spain

EU contribution

€ 231 544,28

Address

CALLE DIPUTACIO 237, P 1 PTA 1
08007 Barcelona 

Region

Este > Cataluña > Barcelona

Activity type

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

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



HELMHOLTZ-ZENTRUM FUR INFEKTIONSFORSCHUNG GMBH

 Germany

EU contribution

€ 131 596,40

Address

INHOFFENSTRASSE 7
38124 Braunschweig 

Region

Niedersachsen > Braunschweig > Braunschweig, Kreisfreie Stadt

Activity type

Research Organisations

Links

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- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

No data

Last update: 6 September 2024

Permalink: <https://cordis.europa.eu/project/id/223101>

European Union, 2025

