Monolithic Adsorbent Columns for Extracorporeal Medical Devices and Bioseparations

Fact Sheet

Project Information

MONACO-EXTRA

Grant agreement ID: 218242

Project closed

Start date
1 March 2008

End date
29 February 2012

Funded under
Specific programme "People" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Total cost
€ 2 060 881,00

EU contribution
€ 2 060 881,00

Coordinated by
UNIVERSITY OF BRIGHTON
United Kingdom

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Objective

The aim of the project is to manufacture novel composite 3D monolithic adsorbent columns for use in extracorporeal medical devices for blood purification (haemoperfusion), therapeutic apheresis and cytapheresis and in bioseparations for analytical and commercial applications. It brings together a multidisciplinary consortium of specialists in different areas of synthetic, polymer and surface chemistry, biomedical and biological sciences, engineers and bioengineers, immunologists and medics united by the aim of developing new and efficient means of treatment of patients with currently incurable diseases. It is comprised of 3 SMEs, 3 universities and a medical hospital from 4 EU countries. The main objectives of the project are: to synthesise a range of novel monolithic polymer cryogels ; iito synthesise polymer monoliths (non-functionalised and functionalised with bioligands) with embedded porous cellulose or activated carbon microparticles; to design monolithic adsorption columns for extracorporeal blood purification from molecular solutes and target cells; to evaluate in vitro their biocompatibility and assess mechanical, physical and physicochemical parameters of the monolithic adsorption columns in an extracorporeal circulation; to test columns for their efficiency and selectivity of cytapheresis and adsorption of biological macromolecules in model systems, and with dialysate, ultrafiltrate and whole blood; and to explore a range of future applications for this technology in critical care medicine

Fields of science (EuroSciVoc)

medical and health sciences > clinical medicine > **critical care medicine**

natural sciences > **biological sciences**

natural sciences > chemical sciences > **polymer sciences**

Keywords

Biomedical engineering | Biomedical materials | Intensive care | Materials engineering

Programme(s)

FP7-PEOPLE - Specific programme "People" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Topic(s)

PEOPLE-2007-3-1-IAPP - Marie Curie Action: "Industry-Academia Partnerships and Pathways"

Call for proposal

FP7-PEOPLE-2007-3-1-IAPP
See other projects for this call

Funding Scheme

MC-IAPP - Industry-Academia Partnerships and Pathways (IAPP)

Coordinator

UNIVERSITY OF BRIGHTON

EU contribution

€ 247 341,00

Total cost

No data

Address

LEWES ROAD MITHRAS HOUSE
BN2 4AT Brighton
United Kingdom

Region

South East (England) > Surrey, East and West Sussex > Brighton and Hove

Activity type

Higher or Secondary Education Establishments

Links

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

Participants (6)

MAST CARBON INTERNATIONAL LTD

United Kingdom

EU contribution

€ 206 627,00

Address

JAYS CLOSE VIABLES
RG22 4BA Basingstoke

Region

South East (England) > Hampshire and Isle of Wight > North Hampshire

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

Protista Biotechnology AB

Sweden

EU contribution

€ 459 370,00

Address

Kvarngatan 2
26722 Bjuv

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

Polymerics GmbH - Spezialpolymere - Klebstoffe - Polymercharakterisierung

Germany

EU contribution

€ 417 770,00

Address

Landsberger Alle, 378
12681 BERLIN

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

MAX IV Laboratory, Lund University

Sweden

EU contribution

€ 259 559,00

Address

Paradisgatan 5c
22100 LUND

Region

Södra Sverige > Sydsverige > Skåne län

Activity type

Higher or Secondary Education Establishments

Links

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

Total cost

No data

UNIVERSITAT FUR WEITERBILDUNG KREMS

Austria

EU contribution

€ 292 739,00

Address

DR KARL DORREK STRASSE 30
3500 Krems

Region

Ostösterreich > Niederösterreich > Waldviertel

Activity type

Higher or Secondary Education Establishments

Links

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

Total cost

No data

BRIGHTON AND SUSSEX UNIVERSITY HOSPITALS NHS TRUST

United Kingdom

EU contribution

€ 177 479,00

Address

Royal Sussex County Hospital, Eastern Road
BN2 5BE Brighton

Region

South East (England) > Surrey, East and West Sussex > Brighton and Hove

Activity type

Research Organisations

Links

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

Total cost

No data

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Permalink: https://cordis.europa.eu/project/id/218242