



Brain injury and trauma monitoring using advanced photonics

Fact Sheet

Project Information

BitMap

Grant agreement ID: 675332

[Project website](#) 

DOI

[10.3030/675332](https://doi.org/10.3030/675332) 

Project closed

EC signature date

12 August 2015

Start date

1 January 2016

End date

31 December 2019

Funded under

EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost

€ 3 835 764,36

EU contribution

€ 3 835 764,36

Coordinated by

THE UNIVERSITY OF
BIRMINGHAM

 United Kingdom

This project is featured in...



Objective

Our vision is to develop a suite of standardised non-invasive devices that will provide essential information about brain health in neurocritical care and neuromonitoring, with a particular emphasis on 1. traumatic brain injury: the “silent epidemic of the third millennium” and 2. hypoxia in newborn children. Survivors present permanent neurological conditions that have a profound impact on the quality of life of individuals and their families, and hence a large socio-economic impact. The key factors influencing these conditions and their treatment are the avoidance of brain hypoxia and metabolic disturbances and this is driving the transfer of new neuromonitoring systems to the bedside where they are being shown to have a transformative effect on patient care.

BitMap will develop non-invasive photonics-based monitoring techniques and data analysis methods to provide biomarkers that could guide patient management. A cohort of multi-disciplinary Early Stage Researchers (ESRs), embedded in leading laboratories across Europe, will work together on an programme designed to address the key technological and clinical challenges in neurocritical care. The ESRs will benefit from the diverse range of expertise in advanced photonics and clinical application which will substantially enhance their research competitiveness and employability, and will together form a critical mass of skilled people working together towards new technologies for improved neuroclinical care.

The challenges involved are fundamentally multi-disciplinary and therefore ESRs trained in a multi-disciplinary environment are essential if progress and clinical impact is to be made. There is currently no graduate programme producing researchers with these attributes, but there is a significant market for such PhDs in the rapidly developing area of biomedical optics and in general in medical imaging technology development. The BitMap project therefore addresses both a clinical and economic need.

Fields of science (EuroSciVoc) 

[natural sciences](#) > [computer and information sciences](#) > **[data science](#)**

[medical and health sciences](#) > [basic medicine](#) > [physiology](#) > **[pathophysiology](#)**

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

[medical and health sciences](#) > [clinical medicine](#) > [obstetrics](#) > **[childbirth](#)**

[natural sciences](#) > [physical sciences](#) > [optics](#) > **[spectroscopy](#)**



Programme(s)

[H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions](#)

MAIN PROGRAMME

[H2020-EU.1.3.1. - Fostering new skills by means of excellent initial training of researchers](#)

Topic(s)

[MSCA-ITN-2015-ETN - Marie Skłodowska-Curie Innovative Training Networks \(ITN-ETN\)](#)

Call for proposal

[H2020-MSCA-ITN-2015](#)

[See other projects for this call](#)

Funding Scheme

[MSCA-ITN-ETN - European Training Networks](#)

Coordinator



THE UNIVERSITY OF BIRMINGHAM

Net EU contribution

€ 546 575,76

Total cost

€ 546 575,76

Address

Edgbaston
B15 2TT Birmingham
 United Kingdom 

Region
West Midlands (England) > West Midlands > Birmingham

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 CIENCIES FOTONIQUES

 Spain

Net EU contribution
€ 247 872,96

Address
AVINGUDA CARL FRIEDRICH GAUSS 3
08860 Castelldefels 

Region
Este > Catalunya > Barcelona

Activity type
Research Organisations

Links
[Contact the organisation](#)  [Website](#) 
[Participation in EU R&I programmes](#) 
[HORIZON collaboration network](#) 

Total cost
€ 247 872,96



POLITECNICO DI MILANO

 Italy

Net EU contribution

€ 516 122,64

Address

PIAZZA LEONARDO DA VINCI 32
20133 Milano 

Region

Nord-Ovest > Lombardia > Milano

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 516 122,64



UNIVERSITY COLLEGE LONDON

 United Kingdom

Net EU contribution

€ 546 575,76

Address

GOWER STREET
WC1E 6BT London 

Region

London > Inner London — West > Camden and City of London

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 546 575,76



INSTYTUT BIOCYBERNETYKI I INŻYNIERII BIOMEDYCZNEJ IM.MACIEJA NALECZA POLSKIEJ AKADEMII NAUK

 Poland

Net EU contribution

€ 448 274,88

Address

UL. KSIECIA TROJDENA 4
02 109 Warszawa 

Region

Makroregion województwo mazowieckie > Warszawski stołeczny > Miasto Warszawa

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 448 274,88



COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

 France

Net EU contribution

€ 262 875,60

Address

RUE LEBLANC 25
75015 PARIS 15 

Region

Ile-de-France > Ile-de-France > Paris

Activity type

Research Organisations

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 262 875,60



PHYSIKALISCH-TECHNISCHE BUNDESANSTALT

Germany

Net EU contribution

€ 249 216,48

Address

BUNDESALLEE 100
38116 Braunschweig

Region

Niedersachsen > Braunschweig > Braunschweig, Kreisfreie Stadt

Activity type

Research Organisations

Links

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

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

[HORIZON collaboration network](#)

Total cost

€ 249 216,48



UNIVERSITY HOSPITAL BIRMINGHAM NHS FOUNDATION TRUST

United Kingdom

Net EU contribution

€ 273 287,88

Address

MINDELSON WAY QUEEN ELIZABETH MEDICAL CENTRE
B15 2PR Birmingham

Region

West Midlands (England) > West Midlands > Birmingham

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

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

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

[HORIZON collaboration network](#)

Total cost
€ 273 287,88



FUNDACIO HOSPITAL UNIVERSITARI VALL D'HEBRON - INSTITUT DE RECERCA

Spain
Net EU contribution
€ 247 872,96

Address
PASSEIG VALL D HEBRON 119-129 EDIFICIO DE RECERCA
08035 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
€ 247 872,96



PICOQUANT INNOVATIONS GMBH

Germany
Net EU contribution
€ 249 216,48

Address
RUDOWER CHAUSSEE 29
12489 Berlin

SME
Yes

Region
Berlin > Berlin > Berlin

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

Total cost

€ 249 216,48



HEMOPHOTONICS SL

Spain

Net EU contribution

€ 247 872,96

Address

AVENIDA CARL FRIEDRICH GAUSS 3 OFICINA 346 MEDITERRANEAN TECHNOLOGY PARK
08860 Castelldefels

SME

Yes

Region

Este > Cataluña > Barcelona

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

Total cost

€ 247 872,96

Partners (2)



PARTNER

THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA CORP

 United States

Net EU contribution

€ 0,00

Address

3451 WALNUT STREET ROOM P 221

19104 Philadelphia 

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



PARTNER 

Washington University at St Louis

 United States

Net EU contribution

€ 0,00

Address

St. Louis 

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

No data

Last update: 17 August 2022

Permalink: <https://cordis.europa.eu/project/id/675332>

