MicroRNAs in the Pathogenesis, Treatment and Prevention of Epilepsy

Fact Sheet

Project information

**EPIMIRNA**

Grant agreement ID: 602130

Project website

Status
Closed project

Start date 1 September 2013
End date 31 August 2018

Funded under:
FP7-HEALTH

Overall budget:
€ 15 567 904,02

EU contribution
€ 11 586 858

Coordinated by:
ROYAL COLLEGE OF SURGEONS IN IRELAND

Ireland

Objective

Epilepsy is a major burden for patients and health systems worldwide. It is a common chronic neurological disorder affecting people of all ages, and the shortfall in existing treatments means that 30% of patients continue to suffer uncontrolled seizures. MicroRNAs (miRNA) are a recently-discovered, network-level layer of gene expression regulation that controls protein levels of entire signaling pathways. Research on miRNAs has unprecedented potential to (i) further our understanding of the underlying disease processes, (ii) deliver novel signatures and prognostic markers for response to therapy, and (iii) deliver novel therapeutics and drug targets. EpiMiRNA consortium members have pioneered discoveries on brain-specific miRNAs, established that miRNA changes are a feature of the pathophysiology of human temporal lobe epilepsy and have demonstrated experimentally that altering miRNA function can potently suppress epileptic seizures and seizure-damage. EpiMiRNA brings together experts on the neurobiology of miRNAs with the leading researchers working on miRNAs in epilepsy, epilepsy geneticists, leaders in miRNA-target detection, proteomics, and systems biology with research-intensive SMEs pursuing miRNA therapeutics and treatments for pharmacoresistant epilepsy. Through highly collaborative, inter-disciplinary and inter-sectorial research, EpiMiRNA will explain the mechanism by which miRNAs contribute to epileptogenesis, characterize genetic variation of miRNA in patients, evaluate seizure-suppressing effects of miRNAs in experimental models, identify novel miRNA modulatory molecules as potential future therapeutics, and develop miRNAs as prognostic markers to identify patients who respond to novel, non-pharmacological
therapeutic interventions including brain stimulation. EpiMiRNA will generate the necessary critical mass in biomedical, clinical and industry/SME research to track, treat and prevent seizures and improve the clinical management of epilepsy patients.

**Field of Science**

/medical and health sciences/basic medicine/neurology/epilepsy

/natural sciences/biological sciences/neurobiology

/natural sciences/biological sciences/biochemistry/biomolecules/proteins/proteomics

/medical and health sciences/basic medicine/physiology/pathophysiology

**Programme(s)**

FP7-HEALTH - Specific Programme "Cooperation": Health

**Topic(s)**

HEALTH.2013.2.2.1-4 - Patho-physiology and therapy of epilepsy and epileptiform disorders

**Call for proposal**

FP7-HEALTH-2013-INNOVATION-1

See other projects for this call

**Funding Scheme**

CP-IP - Large-scale integrating project

**Coordinator**

ROYAL COLLEGE OF SURGEONS IN IRELAND

Address: Saint Stephen's Green 123 2 Dublin, Ireland

Activity type: Higher or Secondary Education Establishments

EU Contribution: € 2 418 033

**Website**

Contact the organisation

Administrative Contact

David Henshall (Prof.)

**Participants** (18)
<table>
<thead>
<tr>
<th>Organisation</th>
<th>EU Contribution</th>
<th>Address</th>
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<td>PHILIPPS UNIVERSITAET MARBURG</td>
<td>€ 2 887 839</td>
<td>Biegenstrasse 10 35037 Marburg</td>
<td>Higher or Secondary Education Establishments</td>
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<td>UNIVERSITAIR MEDISCH CENTRUM UTRECHT</td>
<td>€ 526 180</td>
<td>Heidelberglaan 100 3584 Cx Utrecht</td>
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<td>UNIVERSITY COLLEGE LONDON</td>
<td>€ 418 085</td>
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<td>Paolo Fabene (Prof.)</td>
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<td>Faber Katrin (Dr.)</td>
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<td>Cherie Lathi (Ms.)</td>
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DIXI MICROTECHNIQUES SAS

Address
Chemin De Palente 4 Espace 25025 Besancon

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

Website
Contact the organisation

Administrative Contact
Jean-Pierre Darnis (Mr.)

CERBOMED GMBH

Address
Henkestrasse 91 91052 Erlangen

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

Website
Contact the organisation

Administrative Contact
Jens Ellrich (Prof.)

INTERNA TECHNOLOGIES BV

Address
Jonkerbosplein 52 6534 Ab Nijmegen

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

Website
Contact the organisation

Administrative Contact
Roel Schaapveld (Dr.)
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<td>BICOLL GMBH</td>
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<td>€ 449 880</td>
<td>Richard Riemerschmid Allee 27, 81241 Muenchen</td>
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<td>BIOCOMPUTING PLATFORMS LTD OY</td>
<td>Finland</td>
<td>€ 303 900</td>
<td>Innopoli 3 Vaisalantie 6, 02130 Espoo</td>
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<td>GABO:MI GESELLSCHAFT FUR ABLAUFORGANISATION: MILLIARIUM MBH &amp; CO KG</td>
<td>Germany</td>
<td>€ 182 102</td>
<td>Oskar Von Miller Ring 29, 80333 Muenchen</td>
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TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

United States

Address
Amsterdam Avenue 1210
Room 10027 7003 New York

Activity type
Higher or Secondary Education Establishments

Website
Contact the organisation

Administrative Contact
William Berger (Mr.)

ARTTIC

France

Address
Rue Du Dessous Des Berges 58a
75013 Paris

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

Website
Contact the organisation

Administrative Contact
Martin Dietz (Dr.)

DIXI MEDICAL

France

Address
2a Route De Pouligney
25640 Chaudesfontaine

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

Website
Contact the organisation

Administrative Contact
Jean-Pierre Darnis (Mr.)