Bile acids and epithelial stem cells in intestinal development

Fact Sheet

Project Information

BESIDE

Grant agreement ID: 796838

Project website

DOI
10.3030/796838

Project closed

EC signature date
21 March 2018

Start date
1 April 2018

End date
31 March 2020

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 175 866,00

EU contribution
€ 175 866,00

Coordinated by
UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK
Ireland

Objective

This project will investigate how gut bacteria (the microbiota) influence development of the human gastrointestinal tract (GIT) through innovative research at a world leading research centre (the APC Microbiome Institute) and secondment to the R&D division of a leading multinational biotech company (Perkin Elmer). The gut microbiota comprises a complex community of microorganisms that provide essential metabolic functions in the host. The colonisation of the gut begins during the antenatal period, continues after the moment of birth and is coincident with rapid morphological and functional gut maturation suggesting that these early colonisers and their metabolites have an impact on GIT barrier development. Bile salt hydrolase

(BSH) activity (which deconjugates amino-conjugated bile acids in the gut), is present among the first colonisers of the GIT. Thus, the BESIDE project hypothesis is that this bacterial BSH activity critically affects GIT development and maturation in early life. To understand the mechanisms underlying this relationship, BESIDE will conduct a series of experiments to i) determine how BSH activity influences intestinal stem cells (IESCs); ii) identify the effects on proliferation of these IESCs and iii) extrapolate the obtained results using an in vivo model. BESIDE presents a novel approach using methods based on cutting-edge cell culture, flow cytometry and cell imaging to gain knowledge which is likely to inform the future development of therapeutics to improve barrier function in the neonate. Additional objectives of BESIDE include dissemination and transfer of knowledge to relevant stakeholders (as well as to the general public) and the development of management and career development skills. This, in line with the Work Programme for the MSCA fellowship, will help the applicant to become an independent professional scientist in the field so that she will continue to make significant contributions to the European society and economy.

Fields of science (EuroSciVoc)

natural sciences > biological sciences > microbiology > **bacteriology**

medical and health sciences > medical biotechnology > cells technologies > **stem cells**

Programme(s)

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions MAIN PROGRAMME

H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

Topic(s)

MSCA-IF-2017 - Individual Fellowships

Call for proposal

H2020-MSCA-IF-2017

See other projects for this call

Funding Scheme

MSCA-IF-EF-ST - Standard EF

Coordinator

UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK

Net EU contribution

€ 175 866,00

Total cost

€ 175 866,00

Address

WESTERN ROAD
T12 YN60 Cork
Ireland

Region

Ireland > Southern > South-West

Activity type

Higher or Secondary Education Establishments

Links

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

Last update: 17 August 2022

Permalink: https://cordis.europa.eu/project/id/796838