Milk Powder for Enhancing Probiotic PERformance

Fact Sheet

Project information

MILK PEPPER

Grant agreement ID: 621727

Status

Closed project

Funded under:

FP7-PEOPLE

Overall budget:

€ 169 672,64

EU contribution

€ 169 672,64

Coordinated by:

UNIVERSITE DE LORRAINE

France

Start date

10 January 2015

End date

9 February 2017

Objective

Food technologists from private companies as well as university researchers are currently investing time and effort in the quest of healthier food systems. One innovative solution may be to provide structured dairy powders allowing stabilization and enhancing the performance of bioactive compounds (flavonoid, vitamins, enzymes…) and cells (bacteria). The present project is focused on probiotics stabilization and particularly on Lactobacillus rhamnosus GG. The design of milk powders in Nancy has already proven to be a valuable vector for enhancing the nutritional profile as demonstrated by preservation and controlled release of probiotics during food processing, shelf-life and gastric transit. Nevertheless, the way the bacteria interact with milk components has never been elucidated in order to improve encapsulation yield or survival rate. In addition, the powder form allows a longer shelf-life of the product before incorporation in food systems. Concurrently with this challenge, the number of researchers acting in powder technology and more particularly dairy powders is very limited and only few universities and research centers (mainly located in Europe and Australia) are specialised in this field. In contradiction with this lack of research institutions involved in dairy powder research, 80% of all dairy products may exist in a dry form at some point in their processing lifetime. The project is thus focused on the development of model powders interconnecting process parameters, LGG location in the powder structure (from atomic-, to micro- and macro-scale) and their functionality. This implies an in-depth study of interactions between milk components and LGG, based on the development of new methodologies to characterize the bacterial location within the structure. The industrial objectives are to optimize and control the processes to suit
industrial needs: encapsulation efficiency, stability during processing and storage, gastric resistance, intestinal release.

**Field of Science**

/agricultural sciences/animal and dairy science/dairy
/natural sciences/biological sciences/biochemistry/biomolecules/enzymes

**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)**

FP7-PEOPLE-2013-IOF - Marie Curie Action: "International Outgoing Fellowships for Career Development"

**Call for proposal**

FP7-PEOPLE-2013-IOF

**Funding Scheme**

MC-IOF - International Outgoing Fellowships (IOF)

**Coordinator**

UNIVERSITE DE LORRAINE
Address: Cours Leopold 34, 54052 Nancy Cedex, France
Activity type: Higher or Secondary Education Establishments
EU Contribution: €169,672.64

**Website**

**Contact the organisation**

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