

Partner search

Program: ERA-net SUSFOOD

Call: SUSFOOD's 2nd Joint Call for Proposals

Topic II: Redesign input, waste and side flow strategies to increase resource efficiency and provide added value in food processing, manufacture etc.

Specific Research Area: Based on analysing critical points in the food chain, development of new sustainable food manufacturing processes and technologies to reduce water and energy input. Specific focus areas include hygienic design of food processes and equipment (food safety), development of technologies to reduce energy consumption (including more efficient cooling and freezing processes and storage) and improving product quality (including food safety, nutrition, organoleptic), development of packaging and surface materials, and coatings for process equipment.

Deadline for proposals: 1 April 2014, 15:00 p.m. Brussels time

Research institution details

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Research description

Lactiker -Quality and Safety of Foods from Animal Origin is a multidisciplinary research group integrated by researchers in the fields of Biochemistry and Molecular Biology, Food Science and Technology, and Nutrition and Bromatology. The group's research laboratories, including a food processing pilot plant, are located in the Faculty of Pharmacy and in the Lascaray Research Center, in the Alava Campus of the University of the Basque Country/EHU in Vitoria-Gasteiz.

The Lactiker research group studies safety and quality of foods of ruminant animal origin, from a multidisciplinary point of view: biochemical, microbiological, technological, nutritional, and sensorial, and in two different perspectives:

1. Basic scientific approaches are primarily directed to the study of physico-chemical, microbiological, biochemical, and technological processes involved in

the production of dairy and meat products, from raw materials to the final product offered to consumers.

2. Applied approaches are intended to transfer knowledge and technology to the production sector at large to develop new products and/or to improve safety and quality of traditional products.

Lactiker web-site: <http://www.ehu.es/en/web/lactiker/home>

Proposed project

Whey, a byproduct of cheesemaking, is a highly-contaminating residue due to its very high biological oxygen demand (BOD) which cannot be discharged into any body of water nor can it be used for crop irrigation. Among many initiatives (no attempt to make a comprehensive review of this wide field), efforts to reuse, or recycle whey currently focus on its use as feedstock for the production of single cell protein, bioactive compounds, enzymes, or biofuels, as well as its use as a protein concentrate for cheese or yogurt manufacture. Yet, most of these possibilities are out of reach for small farmhouses which produce PDO cheeses, many of which are scattered over a wide geographical region which renders uneconomical collecting whey for further utilization.

The main objective of the present project is double:

- 1) To reduce its production during cheesemaking by improving certain technological parameters of cheese manufacture
- 2) Decontaminate the produced whey in situ to reuse the resulting water for crop irrigation, thus converting a contaminating waste product into a useful raw material.

Contribution of expected partners to the project

Lactiker Research Group is looking for a suitable project consortium for ERA-Net SUSFOOD 2nd Joint Call for Proposals 2014 in which we will act as project coordinator.

Lactiker Research Group works with raw milk sheep cheeses from small farmhouses.

We welcome partner contributions to any of the 2 objectives of this project.