

**Laboratoire d'Ingénierie des Biomolécules – LIBio**

**Nancy - France**

**Generic Encapsulation concept for Lactic acid bacteria**

**Context**

New generation of powders are currently developed for nutritional purposes. Dynamics of this market are supported by consumer interest and demand for healthy foods. Milk powders enriched in probiotics are an important component of this market. The use of dairy proteins under powder form has several advantages, as probiotics delivery in solid form creates a buffered environment protecting against the high acidity encountered in the stomach and forms a dense matrix that physically protects the cells. The issue facing food technologists is that probiotic protection by encapsulation is extremely strain-dependent. Recently, the principal investigator elucidated the interactions between *Lactobacillus rhamnosus* GG and milk components. Characterization of these interactions is identified as a necessary requirement for an efficient encapsulation process allowing cell targeted delivery.

The postdoctoral fellow will study adhesive interactions between lactic acid bacteria and dairy proteins by using *Lactobacillus rhamnosus* GG as a model organism.

**Expected skills :**

The candidate should have excellent skills in cultural microbiology, purification and analyzes of proteins, and in analyzing protein interactions by using Isothermal Titration Calorimetry (ITC). Expertise in ELISA and in handling High-Throughput Screening facilities will also be appreciated.

**Duration :** 2 years

**Starting time :** January 2019

**Gross annual Salary :** 45 000 €

**Type of funding :** ANR JCJC « GEL »

**Laboratory :** Laboratoire d'Ingénierie des Biomolécules (LIBio) – Université de Lorraine

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