



## PROJECT 2013-2018

# THE EFFECT OF MILK PRODUCTS AND NOVEL MILK PRODUCTS ON SATIETY, FOOD INTAKE, AND METABOLIC CONTROL (GLYCEMIA) IN EARLY AND LATE ADULTHOOD

### Principal Investigator:

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**Number of students trained (MSc, PhD, Post-Doc):**

**6**

**TOTAL BUDGET**

**\$1,051,232**

### INVESTMENT PARTNERS



Agriculture and Agri-Food Canada



## OBJECTIVE:

The primary objective of this project was to provide evidence that could help support claims that dairy products play an important role in controlling appetite (satiety), food intake and post-meal blood glucose levels (postprandial glycemia) in adults.

## KEY OUTCOMES:

A total of 11 randomized, controlled trials involving both young (aged 20-30 years) and older (aged 60-70 years) adults were carried out:

- Dairy consumed with breakfasts of cereal (young adults) or toast and jam (older adults) markedly reduced post-meal glycemia associated with glycemia-inducing carbohydrates.
- The form of dairy (solid, semi-solid or liquid) is a consideration for managing satiety, glycemia and food intake with cheese being the preferred snack or pre-meal appetizer.
- Even a single serving of dairy consumed as a snack, immediately before a meal or with a meal may be effective for reducing appetite and post-meal glycemia.

- Both the total amount of protein, and the casein:whey ratio, in a serving of milk is an important consideration for the design of novel milks aimed at controlling blood glucose levels and satisfying appetite.
- A breakfast meal formulated with a dairy yogurt vs. a plant-based yogurt eaten with granola cereal, resulted in reduced post-meal glycemia, without an increase in subsequent energy intake, and can be recommended as a functional breakfast for improved blood glucose control.

## BENEFITS TO THE DAIRY INDUSTRY

Provides strong evidence for supporting the beneficial impact of dairy products (including milk, yogurt and cheese) in controlling appetite (satiety), food intake and post-meal blood glucose levels.

## SCIENTIFIC PUBLICATIONS

The effect of dairy products consumed with high glycemic carbohydrate on subjective appetite, food intake, and postprandial glycemia in older adults.  
[ncbi.nlm.nih.gov/pubmed/28759735](http://ncbi.nlm.nih.gov/pubmed/28759735)

The effect of dairy and nondairy beverages consumed with high glycemic cereal on subjective appetite, food intake, and postprandial glycemia in young adults.  
[ncbi.nlm.nih.gov/pubmed/28759734](http://ncbi.nlm.nih.gov/pubmed/28759734)

Effect of milk protein intake and casein-to-whey ratio in breakfast meals on postprandial glucose, satiety ratings, and subsequent meal intake.  
[ncbi.nlm.nih.gov/pubmed/30139624](http://ncbi.nlm.nih.gov/pubmed/30139624)