



PROJECT 2013-2018

DAIRY COW MANAGEMENT FOR THE NEXT GENERATION

Principal Investigators:

PIERRE LACASSE

Agriculture and Agri-Food Canada (AAFC), Sherbrooke

XIN ZHAO

McGill University

COLLABORATORS:

Eveline Ibeagha-Awemu and

Nathalie Bissonnette

AAFC - Sherbrooke

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

5

TOTAL BUDGET

\$509,781

INVESTMENT PARTNERS



Agriculture and
Agri-Food Canada



OBJECTIVE:

Since most metabolic disorders and new cases of mastitis occur shortly after calving, extending the length of lactation would reduce the risk of these disorders by decreasing the proportion of the cow's lifetime spent in early lactation. This project explored potential strategies to maintain profitable levels of milk production over extended lactations by improving lactation persistency.

KEY OUTCOMES:

- The study provided baseline information for exploring the biology of lactation persistency.
- Biomarkers in 12 genes were significantly associated with lactation persistency. This information could be used to allow selection of cows and bulls with higher lactation persistency.
- The study results indicated that increasing milk frequency to 3X a day after peak of lactation helps to maintain high levels of milk production that may enable profitable extended lactation.

BENEFITS TO THE DAIRY INDUSTRY

Improved understanding of the metabolic and genetic factors influencing lactation persistency.