

PATHOBIOLOGY RESEARCH PROJECTS IN
IMMUNO-GENETICS



Dr. Mallard's lab created a method of selecting cows and bulls based on their immunity to disease.

Genetic Selection for Disease Resistance: Adapting Immunity+™

High Immune Response (HIR) Technology for Application in the Beef Industry

Respiratory disease in beef calves is a concern because of

- 🛡️ animal welfare issues
- 🛡️ development of antibiotic resistant bacteria
- 🛡️ economic losses

Research activities

- 🛡️ Immune function testing of beef calves at Elora Beef Research Station over a 2 year period
- 🛡️ Testing calves as neonates and retesting after feedlot entry
- 🛡️ Comparing alternative sets of test antigens
- 🛡️ Identifying genomic markers of immunity

Project Goal: Adaptive immunity in health and disease

Development of an optimized test of immune function for use in beef cattle, to improve health, and reduce the need for antibiotics in the industry.



*What if you could
breed disease resistant
animals for your herd?*



Canadian genetics Company, Semex has adopted the test to produce Immunity+ – enabling farmers around the world to improve the health of their herds.



Core Team:

Dr. Doug Hodgins (Research Associate)
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Gryphon's
LAAIR



Growing Forward 2
A federal-provincial-territorial initiative

Food From Thought



*Identification of cattle with superior immune function
would permit breeding for improved disease resistance.*

