CGIL is an international leader in education, research and promotion of animal breeding, genetics and genomics of livestock.

Established in 1984, CGIL is located at the University of Guelph and involves faculty, post-graduates and students in a variety of areas of genetic improvement of livestock including cattle, swine, sheep, goats and poultry, among others.

CGIL has an updated central computing facility and expertise applying computationally intensive methodologies required for genetic and genomic research. CGIL's activities are also supported by several research stations located in Guelph's vicinity.

Centre for Genetic Improvement
of Livestock
Animal Biosciences
University of Guelph
Guelph, Ontario, Canada
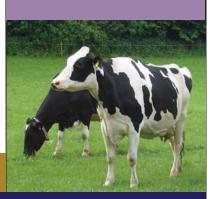N1G 2W1

http://cgil.uoguelph.ca/
Email: cgil@uoguelph.ca

DEPARTMENT OF
ANIMAL
BIOSCIENCES

UNIVERSITY
of GUELPH

CHANGING LIVES
IMPROVING LIFE

Centre for Genetic Improvement of Livestock

Regular Faculty Members

- Flavio Schenkel, Director
  Professor
  Dairy Cattle/Swine/Goat
- Niel Karrow, Professor
  Dairy Cattle/Sheep
- Andy Robinson, Associate Prof.
  Swine/Fish
- Angela Canovas, Associate Prof.
  Beef cattle and small ruminants
- Christine Baes, Associate Prof.
  Dairy cattle
- Jim Squires, Professor
  Swine
- Bonnie Mallard, Professor
  Dairy cattle
- Dan Tulpan, Assistant Prof.
  Computational Biology

Associated Faculty Members

- Filippo Miglior - Dairy
- Mehdi Sargolzaei - Dairy

+ 7 Adjunct Faculty Members

Research

- Multi-species genetic and genomic research.
- A strong history of computationally intensive research with large data sets.

Current research topics include:

- Statistical genetic and genomic analyses in all livestock species.
- Detection of QTL and causative mutations underlying economically important traits.
- Biotechnology for improving disease-resistance.
- Genome-wide selection studies in beef and dairy cattle.

Services and Industry Impact

- CGIL members sit on different industry boards such as DairyGen, Beef Improvement Ontario and Canadian Centre for Swine Improvement, among others.
- CGIL has contributed to many developments in the field of genetic evaluation of livestock such as Canadian Test Day Model, MACE evaluation, selection indexes, SNP tests, genomic selection, etc.

Education

Undergraduate

Courses:

- Quantitative Genetics
- Animal Breeding Methods
- Genetics of Companion Animals
- Biotechnology in Animal Science
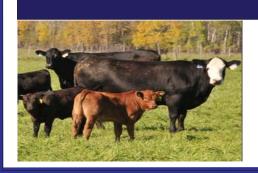- Comparative Immunology
- Animal Disorders

Graduate

M.Sc. and Ph.D. Programs

Courses:

- Quantitative Genetics and Animal Models
- Principles of Selection in Animal Breeding
- QTL and Genetic Markers
- Biometry for Animal Sciences
- System Biology: Integration of Genomic Data
- Topics in Animal Genetics and Genomics

CGIL Mission

To position our industry partners as global leaders in animal genetic products and genetic improvement technologies through world-leading research and training in quantitative genetics, animal breeding and animal genomics.