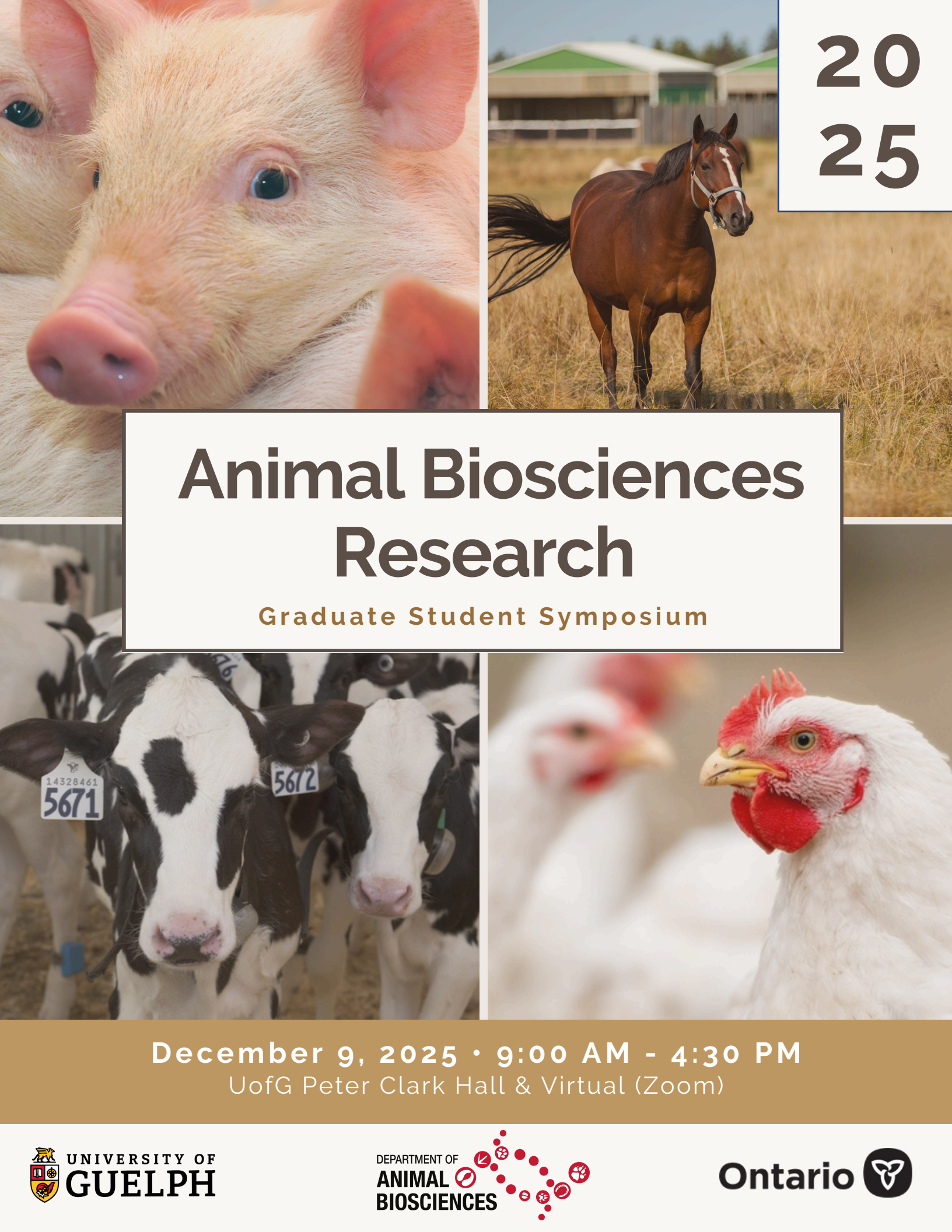




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Animal Biosciences Research

Graduate Student Symposium

December 9, 2025 • 9:00 AM - 4:30 PM

UofG Peter Clark Hall & Virtual (Zoom)

Symposium Agenda

9:00 AM - 4:30 PM

- 9:00 AM** **Opening Remarks and Welcome**
Introduction: Dr. John Kelly, Deputy Minister of OMAFA
- 9:10 AM** **Jessica Brasier** - Influence of a social period on adaptation to an automated milking system*
- 9:20 AM** **Kayleigh Klein** - Effect of calf suckling duration on immunoglobulin G and oligosaccharide profiles in the early lactating period of Holstein cows
- 9:30 AM** **Lydia Benn** - Impact of heat stress on the physiology and growth of pre-weaned dairy heifer calves in a humid continental climate*
- 9:40 AM** **Hannah McCarthy** - Factors impacting electrolyte usage, morbidity, and mortality rates in non-replacement dairy calves at a commercial calf rearing facility
- 9:50 AM** **Melinda Kovacs** - Health and performance of Holstein versus dairyxbeef calves: A retrospective single cohort study*
- 10:00AM** **Nicole Moran** - Organic selenium supplementation to ewes alters lamb hepatic gene expression*
- 10:10 AM** **Timothy Houghton** - Exploring the potential transferability of methane emission SNP effects from dairy to beef cattle populations
- 10:20 AM** **Coffee and Tea Break**
- 11:00 AM** **Krishani Sinhalage** - Identification of functional ovine SNPs in alternative splice regions associated with resistance to gastrointestinal nematode infections*
- 11:10 AM** **Thomas Hicks** - Predictive modeling for reproductive potential of gilts using vaginal microbiomes
- 11:20 AM** **Alyssa Lini** - Effect of mutating porcine CYP17A1 to alter pregnenolone metabolism for controlling boar taint

Symposium Agenda

9:00 AM - 4:30 PM

- 11:30 AM** **Sunbin Kim** - Fermentable carbohydrates as dietary treatments to prevent boar taint*
- 11:40 AM** **Justin Yien** - Antiviral potential of *Lactococcus lactis* A1-2 in swine cells
- 11:50 AM** **Kristen Lamers** - Maternally fed fusarium mycotoxins can alter offspring intestinal development and microbiome composition*
- 12:00 PM** **Lunch and Poster Viewing**
- 12:50 PM** **Guest speaker - Dr. Priska Stahel Darani, Mad Barn Inc.**
- 1:20 PM** **Baran Amini** - Assessment of tibiotarsus cortical bone area for leg health evaluation in purebred male turkeys using computed tomography*
- 1:30 PM** **Clara Ziezold** - Characterizing germ cell dynamics of the post-hatch ovary across three turkey lines
- 1:40 PM** **Lonita Manoa** - Interactive effects of diet complexity and xylanase on plasma biochemistry, liver and abdominal fat weight, in 64-week-old Lohmann Brown Classic hens*
- 1:50 PM** **Lea Nicklas** - How does the cecal microbiota of laying hens of two genotypes respond to prebiotic galactooligosaccharide supplementation and social stress?*
- 2:00 PM** **Jasmin Schiestel** - Enrichment consistency in pullet and laying production: A key to better feather cover*
- 2:10 PM** **Madeleine McAuley** - Pecking blocks reduce feather pecking and improve feather condition of hens in enriched colony systems*
- 2:20 PM** **Renee Garant** - Left or right? Lateralization in laying hen chicks after a 10-week exercise program*
- 2:30 PM** **Coffee and Tea Break**

Symposium Agenda

9:00 AM - 4:30 PM

- 3:00 PM** **Samantha Bezner** - Evaluating the effects of prebiotic yeast derivative and organic mineral supplementation on growth performance, nutrient retention, and gut microbiome of rainbow trout (*Oncorhynchus mykiss*)*
- 3:10 PM** **Bruno Ruiz** - Development and validation of a pipeline for imputing structural variants from low coverage sequencing in rainbow trout
- 3:20 PM** **Lindsay Korac** - Biomarker and gait responses to low-dose reLL-1 β -Induced synovitis in horses
- 3:30 PM** **Kailey Vanderboom** - Anti-inflammatory and cartilage-sparing properties of canurta hemp meal extract in an invitro model of cartilage inflammation
- 3:40 PM** **Kira Cheer** - The use of a dietary polyphenol blend supplemented at 0.02% and 0.04% in male adult cats and its effects on oxidative markers
- 3:50 PM** **Pawanpreet Singh** - Quantity or quality? Source of protein influences dog owner purchasing decisions more than quantity of protein in the absence of marketing claims
- 4:00 PM** **Guest speaker - Dr. Christine Baes, University of Guelph**
- 4:30 PM** **Awards and Closing**

Posters

1. **Zheqi Tao** - Meta-analysis of the effects of extended lactations on the milk production and reproductive performance of dairy cows
2. **Carlotta Ferrari** - Characterizing milk yield stability using dynamic lactation traits from automatic milking systems AMS data
3. **Catalina Andrea Wagemann Fluxá** - Association of fecal cortisol metabolites with indicators of energy balance, inflammation, heat stress and hock injuries in close-up dairy cows*
4. **Tatum Schooley** - Reduce, reuse, recycle: milk processing byproducts dewatered with bentonite as an alternative for high moisture corn in dairy cow diets*
5. **Breno Moreira** - Long-term impact of milk allowance on the performance of Angus-Holstein calves
6. **Kyla Lewis** - Effect of breed and colostrum quantity fed at birth on growth, nutrients digestibility and serum profile of Holstein and Holstein-Angus steers from birth to slaughter*
7. **Carmen VanderWal** - Effect of milk replacer and starter composition on intake, growth and intestinal permeability in Holstein-Angus crossbred calves*
8. **Kathryn Kroeze** - Effect of continuously or 3-day rotationally grazed summer pasture samples on in vitro ruminal fermentation and methane production using the rumen simulation technique (RUSITEC)
9. **Yvonne Shen** - Evaluating alternate-day 3NOP supplementation to reduce enteric methane in forage-fed beef heifers
10. **Miller de Jesus Teodoro** - Functional variants selected from whole-genome sequencing to improve feed efficiency traits in small Indicine beef breeds
11. **Miller de Jesus Teodoro** - Genomic prediction approaches for feed efficiency traits in Guzerat beef cattle
12. **Fatimatzahra Muhammad** - Transcriptional dynamics of lncRNA expression in Holstein cattle across diets and levels of feed efficiency*
13. **Gabriella Condello** - Identification of candidate variants for Ehlers-Danlos syndrome in Holstein
14. **Guilherme Henrique Gebim Polizel** - Linking milk somatic cell microbiome to feed efficiency in Holstein dairy cattle*
15. **Sean Sousa-Kirpaul** - Validation and implementation of a rapid detection test for boar taint in a commercial slaughter plan
16. **Harry Aricibasi** - From pixels to pounds: Automated pig weight estimation using an AI-vision approach
17. **Laurence Cheng** - Systematic review and meta-analyses of efficacy of exogenous fibre enzymes in modulating growth performances and nutrient digestibility in grower and finisher pigs

Posters

18. **Alexander Chattoe** - Effect of age at sexual maturation on bone development in commercial laying hens*
19. **Quintin Boscariol** - Relationships between steroidogenic capacity, early postnatal hormone levels, and gene expression in relation to boar taint development*
20. **Paul Kibaba Waliaula** - Effects of Omega-3 fatty acid or yeast bioactive dietary supplementation on short-chain fatty acid production and lung immune gene expression profiling in layers under different spacing allowance in enriched cages
21. **Sarah Coates** - Replacement of soybean meal with further processed sunflower meal (Sun P46) in broiler feeding programs
22. **Florence Wangechi Nyaga** - Comparative standardized ileal amino acid digestibility in broiler chickens and laying hens
23. **Josephine Memuna Sharka** - Effect of metabolizable energy and crude protein on sexual maturation in layer hens – Insights from meta analyses
24. **Sylvester Mutinda** - Interaction between low crude protein and raised without antibiotics concepts on growth performance, organ weight, and feeding cost in broiler chickens
25. **Steeley Ellis** - Finding the perfect perch: Nighttime roosting preferences of laying hen pullets
26. **Olaseke Johnson** - Nighttime roosting behaviour of laying hens: Preferences for grasping and elevation
27. **Zeenat Issa** - Effects of life-stage, nutrition and genetic family on growth performance and gut microbiota in rainbow trout *Oncorhynchus mykiss*
28. **Mya Gowanlock** - Interactions between humic acid and antimicrobials oxytetracycline and florfenicol in diets for rainbow trout (*Oncorhynchus mykiss*): Implications on systemic drug accumulation, gut microbiome diversity, nutrient proximate composition and fillet Omega-3 profile
29. **Alora Brown** - Evaluation of Akston nerve growth factor vaccine in horse
30. **Brodie Ross** - Does exercise stress provoke gastrointestinal hyperpermeability? Development of an in vitro organoid model of exercise-induced hyperpermeability
31. **Ryan van Diggelen** - The impact of three levels of dietary moisture on free water intake, total water intake and the drinking habits of the domestic shorthair cat (*Felis catus*)
32. **Benjamin Fox** - Revisiting eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) recommendations for adult maintenance dogs: Higher doses enhance lipid incorporation but decrease antioxidant status
33. **Vera Petroff** - Exploration of respiratory quotient and energy expenditure in gestating and lactating queens

Speaker

Dr. John Kelly - Deputy Minister (Ontario Ministry of Agriculture, Food and Agribusiness)



Dr. John Kelly became Deputy Minister in August 2020. John brings more than 25 years of leadership in the agricultural, food and life sciences industries, spanning private, public and not-for-profit sectors. Prior to joining OMAFRA, John was Chief Innovation Officer at Bioenterprise Corporation, where he was responsible for leading the acceleration of agri-tech business ventures. John has also held senior-level roles in organizations such as DNASTack Inc. Ontario Fruit and Vegetable Growers' Association and MaRS Landing. John holds a Bachelor of Science in Agriculture and Doctor of Philosophy (PhD) from the University of Guelph and a Master of Science from the University of Alberta.

Guest Speakers

Dr. Priska Stahel Darani - Director of Research, Mad Barn Inc.



Dr. Priska Stahel Darani is a passionate animal scientist whose career has focused on understanding how nutrition regulates metabolism and promotes health in both humans and animals. Originally from a dairy farm in Eastern Ontario, she earned her B.Sc. in Animal Biology at the University of Guelph, where she developed a strong interest in nutrition while working at the Arkell Poultry and Equine Research Station. She went on to complete an M.Sc. at Guelph, supported by OMAFRA funding, investigating how altering the amino acid balance of dairy cow rations influences milk yield and composition.

Building on this foundation, Dr. Darani completed her Ph.D. in 2016, focusing on the nutritional regulation of insulin sensitivity and the use of mathematical models to predict metabolic responses. She is a Certified Professional Animal Scientist (PAS) through the American Registry of Professional Animal Scientists, reflecting her commitment to evidence-based, ethical nutrition practices. In her current role as Director of Research at Mad Barn Inc., she leads programs dedicated to advancing equine nutrition and developing science-driven feeding solutions that enhance health and performance.

Guest Speakers

Dr. Christine Baes - Professor and Research Chair at the University of Guelph



Dr. Christine Baes is a leading researcher in quantitative genetics, genomics, and animal breeding. She serves as Professor and Canada Research Chair in Livestock Genomics in the Department of Animal Biosciences at the University of Guelph, where she also holds the role of Acting Associate Dean of External Relations in the Ontario Agricultural College.

Her internationally recognized research focuses on using genomic tools to advance sustainable breeding programs that improve animal welfare, health, and resilience—particularly in dairy cattle. Dr. Baes leads several large-scale research initiatives that bridge fundamental science with practical industry applications, including efforts to reduce greenhouse gas emissions, enhance productivity, and strengthen animal health.

Beyond her research, Dr. Baes is a dedicated educator and mentor, training the next generation of geneticists and breeders in sustainable and ethical livestock production.

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