

# ONE GENOME, ONE HEALTH

OUR ANIMALS, THE ENVIRONMENT AND US

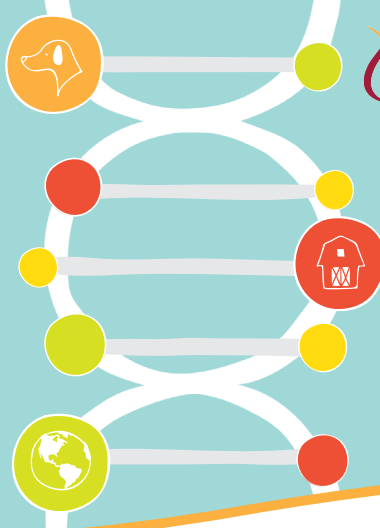
8th Annual Conference



# ONE GENOME ONE HEALTH

OUR ANIMALS, THE ENVIRONMENT  
AND US

October 17th & 18th 2017  
Edmonton, AB



## Tuesday October 17<sup>th</sup> AM Sessions

**08:00-09:00**

### REGISTRATION

09:00-09:15

Welcome and Introductions

Tanya McDonald (MC)

Vice President of Research and External Relations, Olds College

09:15-10:00

Genomic Tools for Commercial Beef Cattle

John Basarab

Senior Research Scientist, Alberta Agriculture and Forestry

10:00-10:15

The Linking of Logistics ... Pasture to Lab (and back again)

Michelle Miller

CEO, Delta Genomics

**10:15-10:45**

### COFFEE BREAK

10:45-11:00

The Rancher's Solution to Adopting Technology

Shannon Argent

Director, Technology Access Centre, Olds College

11:00-11:30

Genomic Applications on the Ranch

Doug Wray

Irricana Rancher

11:30-12:00

Panel Discussion & Q&A

Shannon Argent

John Basarab

Michelle Miller

Doug Wray

Moderator: Tanya McDonald

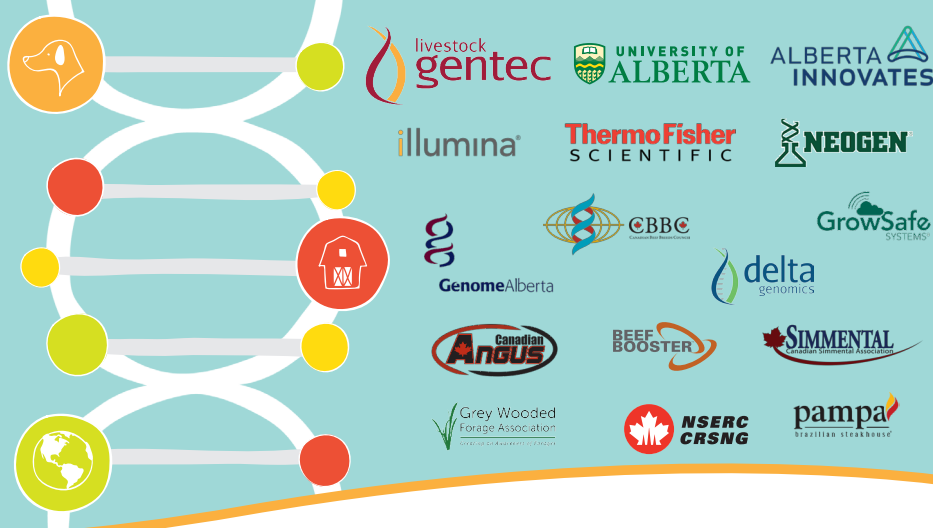
**12:00-13:15**

### LUNCH

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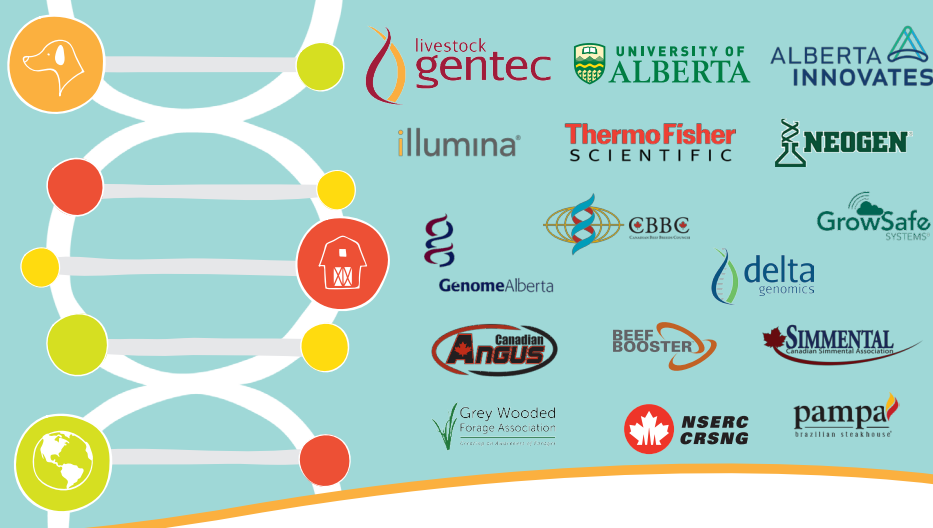
## Tuesday October 17<sup>th</sup> PM Sessions

- 13:15-13:30 Agfood: A Beacon For Our Future  
Stanford Blade  
Dean, Faculty of Agricultural, Life and Environmental Sciences
- 13:30-14:15 The Role of Genomics in Precision Health Care  
Steven Jones  
Co-Director & Head, Bioinformatics,  
Canada's Michael Smith Genome Sciences Centre
- 14:15-14:45 Using Genomics to see the Forest for the Trees  
Janice Cooke  
Associate Professor, University of Alberta
- 14:45-15:15 COFFEE BREAK**
- 15:15-15:35 The Role of the Microbiome in Feedlot Health  
Edouard Timsit  
Associate Professor, Cattle Health, UCVM
- 15:35-16:15 Use of Antimicrobials in Beef Production: Implications for Resistance and ID  
Tim McAllister  
Principal Research Scientist, Ruminant Nutrition & Microbiology,  
Livestock Research Innovation Centre, Agriculture and Agri-Food Canada
- 16:15-16:30 Building R&D Partnerships in Agriculture Through NSERC  
Tricia Meaud  
Research Partnerships Promotion Officer, Prairie Regional Office, NSERC
- 16:30-16:40 Closing Statements  
Graham Plastow  
CEO, Livestock Gentec
- 17:30-21:00 DINNER PROGRAM**  
Student Poster Session & Networking Evening  
Pampa Brazilian Steakhouse, 9929 109 St NW

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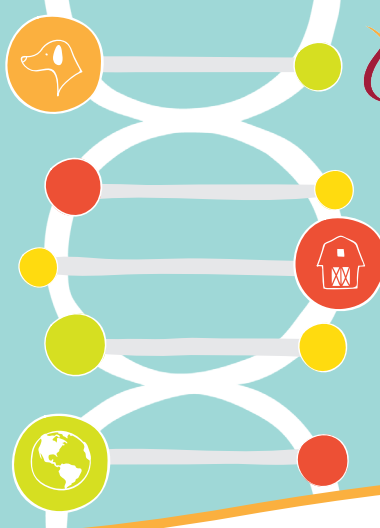
## Wednesday October 18<sup>th</sup> AM Sessions

09:00-09:15	Welcome and Introduction Josie Van Lent (MC) Dean, Agriculture Sciences, Lakeland College
09:15-9:25	Alberta Innovates: A Brief Update on Key Initiatives Cornelia Kreplin Executive Director, Sustainable Production and Food Innovation, Alberta Innovates
09:25-10:10	Agricultural Myths and Facts Joe Schwarcz Director, Office for Science and Society, McGill University
10:10-10:55	Pursuing Evidence Based Outcomes in the Beef Industry William Torres Cattle and Research Manager, Cattleground Feedyards
10:55-11:25	<b>COFFEE BREAK</b>
11:25-12:10	Genome Editing in Livestock – Another Breeding Tool for Genetic Improvement? Tad Sonstegard Chief Scientific Officer, Acceligen
12:10-13:40	Student Poster Award Presentations Nicky Lansik Research Analyst, GrowSafe Systems
LUNCH	<b>La RONDE, Chateau Lacombe, 24th floor</b>

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## Wednesday October 18<sup>th</sup> PM Sessions

### 13:40-14:30 PANEL DISCUSSION

Wining the Competitiveness Race: Passing the Baton from Inspiration to Application

David Chalack – International Sales Manager, Alta Genetics Inc.

Rollie Dykstra – VP Investments, Alberta Innovates

Tad Sonstegard – Chief Scientific Officer, Acceligen

William Torres – Cattle and Research Manager, Cattleland Feedyards

Moderator: Stephen Morgan Jones - President, Amaethon Agricultural Solutions

### 14:30-14:50 COFFEE BREAK

### 14:50-15:50 Genome Canada Updates

Overview: David Bailey – President and CEO, Genome Alberta

Beef: John Crowley – Director of Scientific and Industry Advancement, CBBC

Dairy: JP Brouwer – Producer and Chair, Alberta Milk Research Committee

Pork: Michael Dyck – PhD, Professor University of Alberta

### 15:50-16:00 Closing Statements

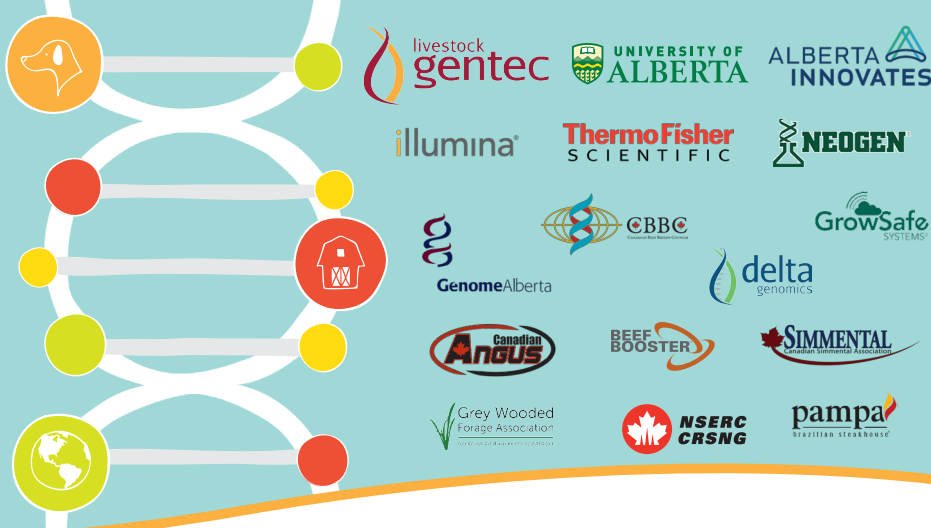
Graham Plastow

CEO, Livestock Gentec

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## Presenter Bios - October 17<sup>th</sup> AM Sessions

### Tanya McDonald (Emcee)

Tanya McDonald has worked at Olds College for 17 years, and serves as the Vice President, Research and External Relations. In this role, she focuses on fostering relationships and constructive agreements with academic institutions, government, industry, entrepreneurs, small businesses and community leaders. She is responsible for providing leadership and strategic direction for the Centre for Innovation, Olds College Farm, Continuing Education, Communications and Marketing, Community and Alumni Relations, Special Events and Broncos Athletics. She is a member of the Olds Rotary Club, and sits on the Board of Directors for the Olds and District Chamber of Commerce and the Olds Institute. Tanya holds a MSc Degree in Environmental Engineering from the University of Calgary.

### John Basarab - Genomic Tools for Commercial Beef Cattle

John Basarab received his PhD in Animal Genetics and Biochemistry in 1981 from the University of Alberta. As Senior Research Scientist with Alberta Agriculture and Forestry, he has over 25 years of experience in beef cattle production and management. Current areas of work include improving feed efficiency, delivering genomic and production technologies to the beef industry, and investigating greenhouse gas mitigation in beef cattle. John is an Adjunct Professor at the universities of Alberta and Manitoba, member of the senior management team of Livestock Gentec, and former Associate Editor for the Canadian Journal of Animal Science. He is also the author or co-author of over 300 scientific and extension articles, and the winner of the 2010 Canadian Animal Industries Award in Extension and Public Service.

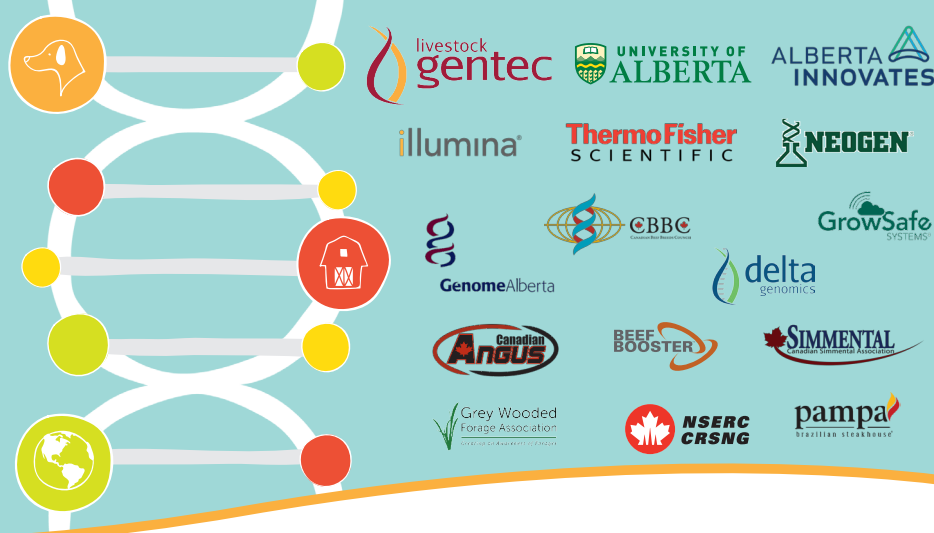
### Michelle Miller - The Linking of Logistics... Pasture to Lab

Michelle Miller completed her BSc in Molecular Genetics from the University of Alberta and Masters of Science in Human Genetics from McGill University. During this time, she participated in a 16-month internship at the Alberta Research Council (currently, Alberta Innovates), a one-year student exchange program at the University of London, and studied in Rio de Janeiro, Brazil, for a summer. Previous work experience was in Canada and the United States, researching various genetic conditions. Michelle completed her MBA at the University of Alberta in 2015. At Delta Genomics, Michelle was hired as technical staff in 2012 where she sequenced over 300 influential bulls as part of the Canadian Cattle Genome Project. Once she began her MBA part-time, she was promoted to Director of Operations in 2014 and became responsible for the laboratory's operations, specifically process improvement and optimization, financial management, customer service, and human resource activities. In her current role as CEO, Michelle is working towards expanding the use of genomic technologies in the commercial cattle sector.

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## Shannon Argent - The Rancher's Solution to Adopting Technology

Shannon Argent is a graduate of the Olds College Animal Health Technician program. She brings years of business management and livestock industry experience to her role as manager of the Technology Access Centre for Livestock Production at the College. During her varied career, she started and sold two successful business, worked as an embryologist and technician for Alta Genetics, and was the provincial Verified Beef Plus Coordinator for Alberta. She was a 4-H Beef leader in Cremona for many years, and has held various roles on numerous boards and committees, including as the current Chair for the Science Advisory Committee for the Canadian Roundtable for Sustainable Beef. To this day, she also continues to farm and ranch Northwest of Cremona with her husband, three children and parents.

## Doug Wray - Genomic Applications on the Ranch

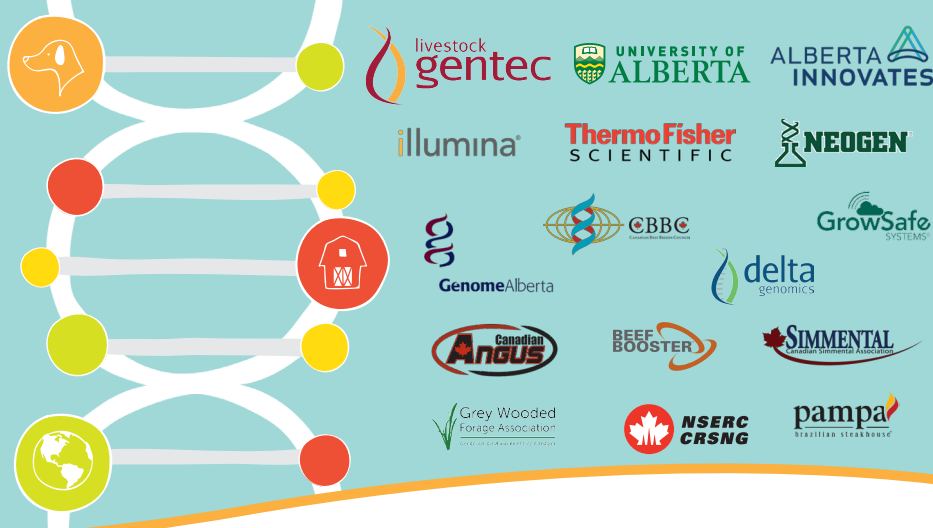
Doug and Linda Wray, with Tim and Joanne Wray, operate the Wray Ranch at Irricana on land first farmed by Doug's grandfather in 1910. Until 1985, the farm was a mixed farm. Now they run a forage-focused, year-round grazing plan, moving cattle through high legume-tame pastures in summer, stockpiled native range from November to January, and swath-grazing to grass in May. Since 2005, they have worked to improve their beef genetics to better harvest the energy in the forages on the ranch. They had a primarily red herd with Red Angus and M2 Beefbooster influence. They have used Black Angus and recently Black Simmental, both natural service and through AI, with a goal of having a fertile productive cow herd from which to pull replacement heifers while generating feeder cattle that perform above industry averages. In 2008, the ranch began using Herdtrax with Dr Troy Drake to capture herd data and measure progress. They retained ownership in many feeder cattle to get productivity information through to carcass data. More recently, they have DNA on the 2015 and 2016 calf crops and some feed efficiency data that have begun to provide a genetic picture of the herd.



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## Presenter Bios - October 17<sup>th</sup> PM Sessions

### Stanford Blade - Afternoon Introduction and Welcome

Stanford Blade is Dean of the Faculty of Agricultural, Life and Environmental Sciences (ALES) at the University of Alberta. Born in Alberta, Canada where he was raised on a dairy and grain farm, Stan attended the University of Alberta for his first degree (B.Sc.) in genetics and obtained his M.Sc. (Crop Science) from the University of Saskatchewan for a breeding/physiology study on wheat. His doctorate was awarded by McGill University (Montreal, Canada) for work done at the International Institute of Tropical Agriculture on a Canadian International Development Agency PhD Scholarship. He is a 2012 graduate of the Wharton Business School's Executive Development Program (University of Pennsylvania). Stan has served as Chief Executive Officer of the Alberta Innovates Bio Solutions Corporation (AI Bio), a provincial government agency that leads and coordinates science and innovation to grow prosperity in Alberta's agriculture, food and forestry sectors. During his tenure, he led AI Bio's five priorities: 1) sustainable production, 2) quality food for health, 3) prion diseases, 4) ecosystem services and 5) building the bioeconomy.

Stan's expertise has been recognized through his invitations to participate in research reviews conducted by the European Union, Consultative Group on International Agricultural Research, Food and Agriculture Organization, Natural Sciences and Engineering Research Council, and the Canadian Foundation for Innovation. He has served on the Boards of the TELUS World of Science, the Edmonton Public Library and CHF - Partners in Rural Development (an international NGO). Stan was named by Alberta Venture as one of "Alberta's 50 Most Influential People" in 2012 and was appointed by the Minister of International Cooperation (Government of Canada) to the governing body of the Canada International Food Security Research Fund in 2013.

### Steven Jones - The Role of Genomics in Precision Health Care

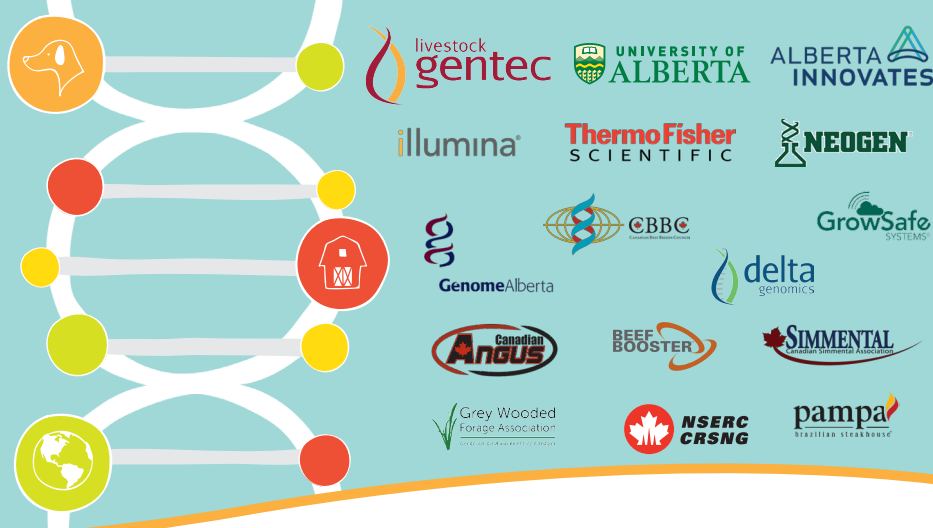
Steven Jones gained his PhD at the Sanger Institute, Cambridge, UK in 1999, where he was involved in the *C. elegans* genome project. He has played a role in numerous genome projects, including that of the human, mouse, rat, bovine, fruit fly and the SARS coronavirus. Currently, he is Head of Bioinformatics and Co-Director of the Genome Sciences Centre at the BC Cancer Agency in Vancouver. Dr. Jones's major research focus is in the computational analysis of DNA sequence and the analysis of genomic and transcriptomic data. In healthcare research, he has applied next-generation DNA sequencing technology to detect mutations in patient samples and cancer cell lines of various cancer types, and under the influence of different therapeutics. A key goal is to develop bioinformatic approaches to predict the most efficacious therapies from patient tumour samples to help guide clinical decision making. In 2014 and 2016, Thomson Reuters named him one of the world's most influential researchers, being in the top 1% of cited scientists.



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## Janice Cooke - Using Genomics to see the Forest for the Trees

Janice Cooke is an Associate Professor in the Department of Biological Sciences at the University of Alberta. She received her BSc from the University of Victoria, then spent some time as a technician at the Weyerhaeuser Technology Centre in the US before completing her PhD at the University of Alberta. She went on to a postdoc at the University of Florida, and was a research associate at Université Laval before returning to the University of Alberta in 2005. The Cooke lab investigates how forest trees respond to environmental factors like pests, pathogens, drought, cold and day length to identify genes that are important for trees to respond to these cues. Janice and her group participate in a number of large-scale research projects, collaborating with geneticists to discover genes controlling adaptive traits like pest and pathogen resistance. Currently, Janice is Director of the TRIA Mountain Pine Beetle NSERC Strategic Network, and is Associate Editor-in-Chief for Tree Physiology.

## Edouard Timsit - The Role of the Microbiome in Feedlot Health

Edouard Timsit obtained his DVM degree with honors from the University of Liège (Belgium) in 2006. Afterwards, he did a residency for the European College of Bovine Health Management (ECBHM) combined with a PhD on Bovine Respiratory Disease (BRD) and epidemiology at the Nantes-Atlantic College of Veterinary Medicine (France). In 2012, Dr. Timsit joined the University of Calgary (Canada) as an Assistant Professor in Cattle Health, where he developed a research program on pathogenesis, detection, diagnosis and treatment of BRD. In addition to his research and teaching at the University of Calgary, Dr Timsit works as a feedlot consultant one day per week at Feedlot Health Management Services (Okotoks, Canada).

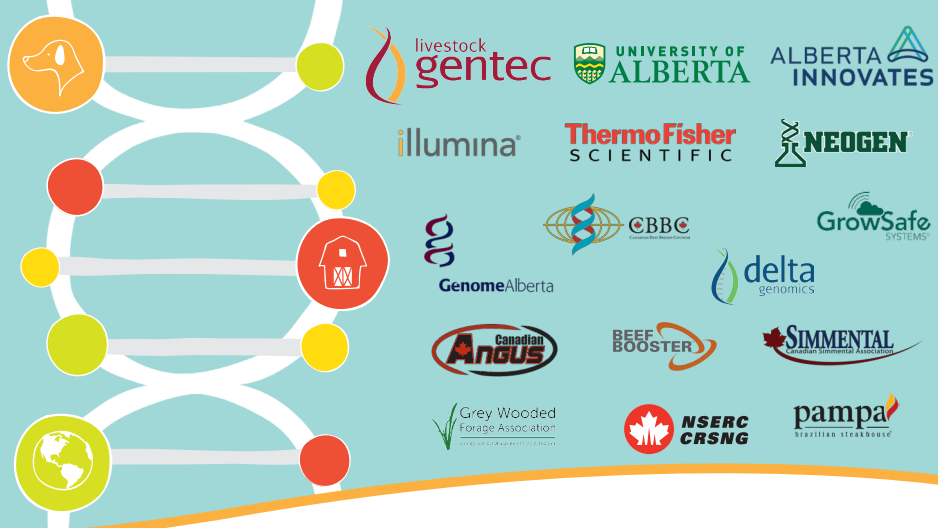
## Tim McAllister - Use of Antimicrobials in Beef Production: Implications for Resistance and Infectious Disease

Tim McAllister was raised on a mixed cow-calf operation in Innisfail Alberta. He obtained his MSc in Animal Biochemistry at the University of Alberta, and his PhD in rumen microbiology and nutrition from the University of Guelph in 1991. After an NSERC postdoctoral fellowship at the University of Calgary, he held appointments in technical, biology and science positions, and was promoted to Principal Research Scientist in 2005. Tim leads a diverse research team studying various areas of beef research. He has participated and led projects that relate to antimicrobial resistance in beef cattle production systems since 1997. Tim has authored over 500 papers, and is a recipient of the Pfizer Young Scientist Award, the Canadian Animal Industries Award in Extension and Public, the Elanco Award for the Production of Safe and Affordable Food, the Shurgain Award for Excellence in Meat Science and Nutrition, the American Feed Industry Research Award, Queen's Diamond Jubilee medal and the Governor General's award for Excellence in the public service. He was also a contributor to the Intergovernmental Panel on Climate Change, which shared the 2007 Nobel Peace Prize with former US Vice President, Al Gore.

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## Tricia Meaud - Building R&D Partnerships in Agriculture Through NSERC

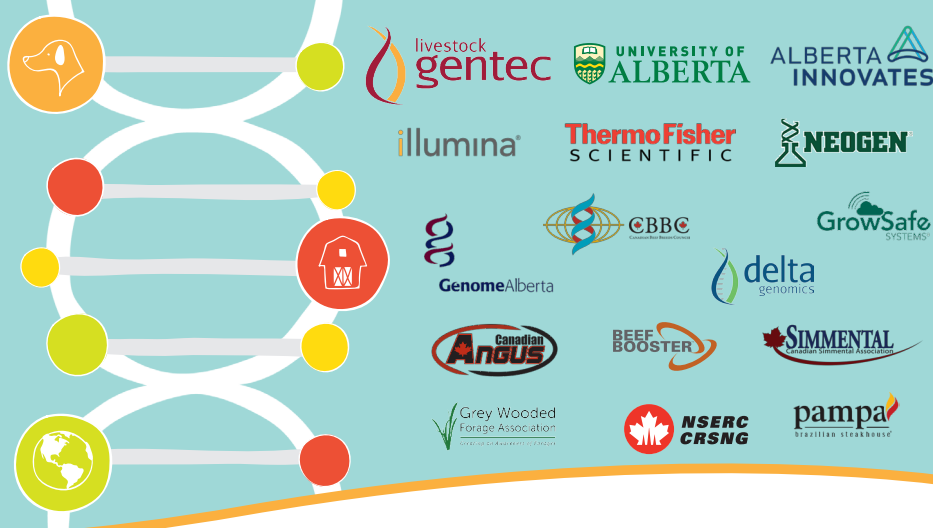
As the Research Partnerships Promotion Officer for the NSERC Prairies Regional Office, Tricia Meaud coordinates regional promotion and delivery of Connect Grants and Experience Awards. She is responsible for outreach to Prairie companies and undergraduate students eligible for Experience Awards, and she coordinates efforts to increase awareness of Connect Grants with the post-secondary community and industry organizations. Tricia is also responsible for reviewing applications for Connect Grants and Experience Awards in the region.

Tricia began her career with Alberta Agriculture, Food and Rural Development as a Research Assistant and Project Manager. She subsequently administered several funding programs at the Agriculture and Food Council and the Alberta Livestock and Meat Agency (ALMA). After moving to Manitoba, Tricia worked as a Research Assistant with the Rural Development Institute at Brandon University. Prior to joining NSERC in 2016, Tricia was a Service Innovation Specialist with Manitoba Agriculture, where she also worked as a Program Officer on several Growing Forward 2 programs. Tricia has a BSc in Human Ecology from the University of Alberta, and is a Professional Home Economist in Manitoba.

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## Presenter Bios - October 18<sup>th</sup> AM Sessions

### Josie Van Lent - Welcome and Introductions

Before coming to Lakeland College, Josie Van Lent spent 26 years employed in the agriculture industry. She spent the first half of her career working for Alberta Agriculture, Food and Rural Development as a district agriculturist and beef specialist. Following this, she was employed in the crop service industry as an agronomist/sales manager with Webb's Crop Services in Vermilion. She moved on from Webb's to manage the northeastern Alberta Crop Input Division for the United Farmers of Alberta. While in industry, Josie also taught part-time in the agriculture programs at Lakeland. Josie is also a partner in Staden Farms Ltd., a commercial farm operation that includes a beef, bison, elk and grain enterprise.

### Cornelia Kreplin - Alberta Innovates: A brief update on key initiatives

As Executive Director at Alberta Innovates, Cornelia Kreplin is engaged in activities designed to grow prosperity of the agriculture, food and forestry sectors. This includes investment in research and innovation that contributes to sustainable livestock, crop and forest production; food safety and the development of new ingredients, foods, beverages and bioactives. Cornelia works with others to define future opportunities and connects people who can collaboratively build on their respective strengths.

Cornelia's training in veterinary medicine led to her career with Alberta Agriculture and Forestry. She served as the provincial reproductive pathologist and later as Alberta's first Chief Provincial Veterinarian before accepting the challenge of building a Food Safety Division for the Ministry in 1999. Later, as Executive Director of Agriculture Research Division, Cornelia enabled staff to participate in development of new information or products for Alberta's primary agricultural producers. An interim assignment as General Manager of Agricultural Products Marketing Council allowed Cornelia to remain in touch with the opportunities and challenges facing Alberta's agriculture industries. Cornelia now applies what she has learned from these experiences to her position at Alberta Innovates.

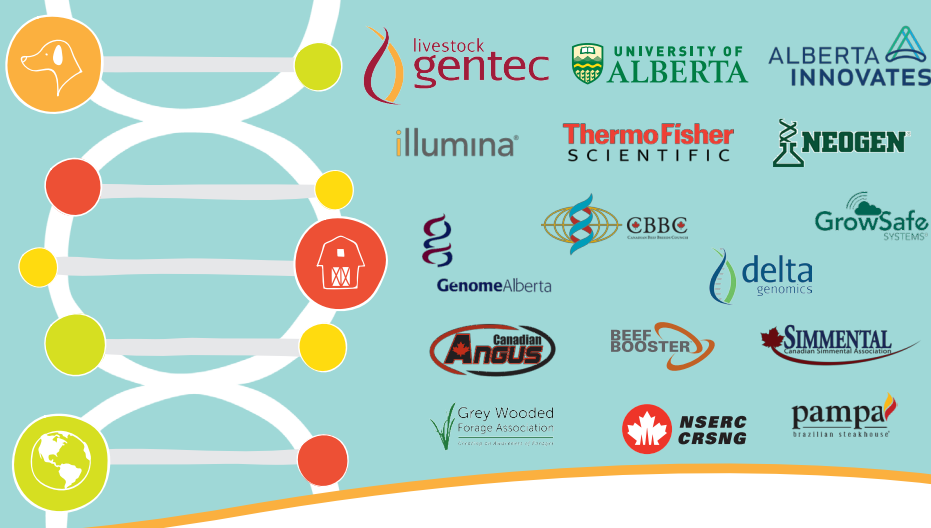
### Joe Schwarcz - Agricultural Myths and Facts

Joe Schwarcz is Director of McGill University's Office for Science and Society, which is dedicated to demystifying science and separating sense from nonsense. He is well known for his informative and entertaining public lectures on topics ranging from the chemistry of love to the science of aging. Professor Schwarcz has received numerous awards for teaching chemistry and for interpreting science for the public. He is the only non-American to win the American Chemical Society's prestigious Grady-Stack Award for demystifying chemistry. He hosts "The Dr. Joe Show" on Montreal radio, has appeared hundreds of times on television and is the author of 16 best sellers. Also an amateur conjurer, Dr. Joe often spices up his presentations with a little magic.

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## William Torres - Pursuing Evidence-based Outcomes in the Beef Industry

William Torres hails from Laredo, Texas, where his family has been ranching and farming since 1708. A graduate from Texas A&M University, he holds Bachelor of Science degrees in Animal Science, Biology and Physics. William is currently the cattle manager for Cattleground Feedyards and research co-manager for the Integrated Research Beef Station at Cattleground Feedyards Ltd. (IBRS-CFL) were since 2008, the research team has managed forty-eight (48) contract research projects utilizing over 88,000 head of cattle, successfully completed 19 published research trials for various clients and seven corporate research reports reviewed by industry. IBRS-CFL has extensive experience with genomic research and to date has collected data on nearly 76,000 head of cattle. Their feeding and health programs are unique and include individual animal data, as well as cattle raised without the use of added hormones and liquid health. The Cattleground National Bull Evaluation Centre located on the feedlot site is the largest of its kind in the world, with a total capacity of 5,000 head of superior sires.

## Tad Sonstegard - Genome Editing in Livestock: Another Breeding Tool for Genetic Improvement?

Tad Sonstegard is Chief Scientific Officer of Acceligen, a food-animal genetics subsidiary of Recombinetics, where he leads business development and research efforts dedicated to livestock improvement around the world. The main focus is to apply advanced precision breeding or genome editing to improve livestock genetics in a way that promotes sustainability and animal welfare. Previously, he led a livestock genomics research program at the USDA, ARS Beltsville that delivered many applications in germ plasm conservation and genetic improvement for livestock, including the first commercially successful, ag-based SNP tool. He also identified the causative variation affecting fertility and thermo-tolerance in cattle and has led consortia to generate genome assemblies of the water buffalo, goat, Zebu cattle, and an expression atlas of cattle. Dr. Sonstegard received his undergraduate degree from Iowa State University and his PhD from the University of Minnesota. He has published 187 peer-reviewed articles, and received award recognition for his work in improving livestock genetics through genomics research.

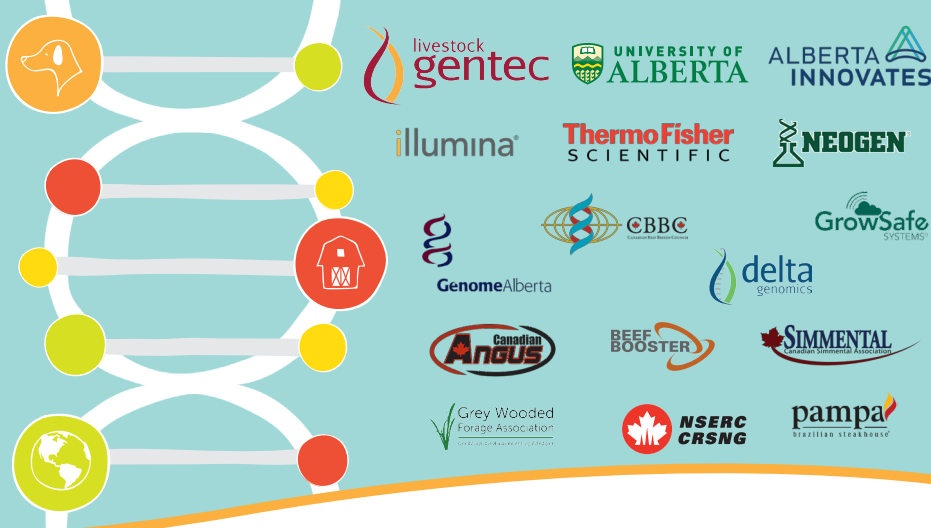
## Nicky Lansink - GrowSafe Poster Award Presentations

Nicky Lansink joined GrowSafe in 2017 and is currently responsible for conducting data analysis and working on research projects. Nicky has a Bachelor of Science in Agriculture, and she is currently completing her Master's in Animal Science, both from the University of Alberta. During her Master's, Nicky studied performance and methane emissions of RFI-selected cattle in drylot and on pasture. Nicky has received several prestigious academic scholarships and awards including the Canadian Hereford Association's 2016 Prize for Beef Cattle Innovation. Growing up on a mixed farm, and spending several summers working on a feedlot, has given Nicky practical skills and a true appreciation for the beef industry.

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## Presenter Bios - October 18<sup>th</sup> PM Sessions

**Stephen Morgan Jones** left Agriculture and Agri-Food Canada (AAFC) in 2014, after 10 years at the Director General level with various responsibilities including Research Centre Science Management, management of innovation programs and the AAFC national business and commercialization office. He was responsible for more than \$100M of annual research investments in crop, livestock, food and bio-products. Prior to this, he was a Research Centre Director and scientist with AAFC and a Professor at the University of Guelph. He has published 170 scientific papers and received a number of national and international awards including a Queen's Jubilee Medal from the Canadian Cattlemen's Association. Dr. Morgan Jones currently advises on large-scale project development, review of research programs, organizational change and strategic direction. He chairs the Board of Livestock Gentec, is a board member of Genome Alberta and on research committees for Alberta Agriculture and Food and NSERC strategic networks.

**Dr. David Chalack** is a veterinarian whose career has moved from veterinary practice to executive management and consulting. The One Health Initiative is the foundation from which his professional career is crafted—the dependent relationship linking the environment, animal health and human health as it relates to sustainable growth. He is a widely respected expert in the meat and livestock industry, with particular interests in sustainable practices and how the industry uses land and water. Dr. Chalack has been Chair of the Board of ALMA for the past six years. He is currently the international sales manager for Alta Genetics Inc., a job that has taken him to South America, Australia, Asia, and Europe, as well as across Canada. He is also president and part owner of Rocky Mountain Holsteins, Inc., and an official judge for Holstein Canada. Dr. Chalack chairs the ministerial advisory board of the Canadian Food Inspection Agency. He also sits on the boards of several organizations, including the Canadian Dairy Network, and chairs the Calgary Economic Development Agribusiness Committee, and the Alberta Economic Development Authority. Formerly, he served as president and board chair of the Calgary Exhibition and Stampede, as a director on the boards of Horse Racing Alberta and the Calgary Zoological Society, and as past chair of Livestock Gentec. He is now chair of the Calgary Economic Development sub committee on agri-food and agri-food processing, and was a member of the dean's advisory council for the University of Calgary's Faculty of Veterinary Medicine. As recognition for his 30 years spent advancing Canadian agriculture domestically and internationally, Dr. Chalack was inducted into the Canadian Agricultural Hall of Fame in 2011.

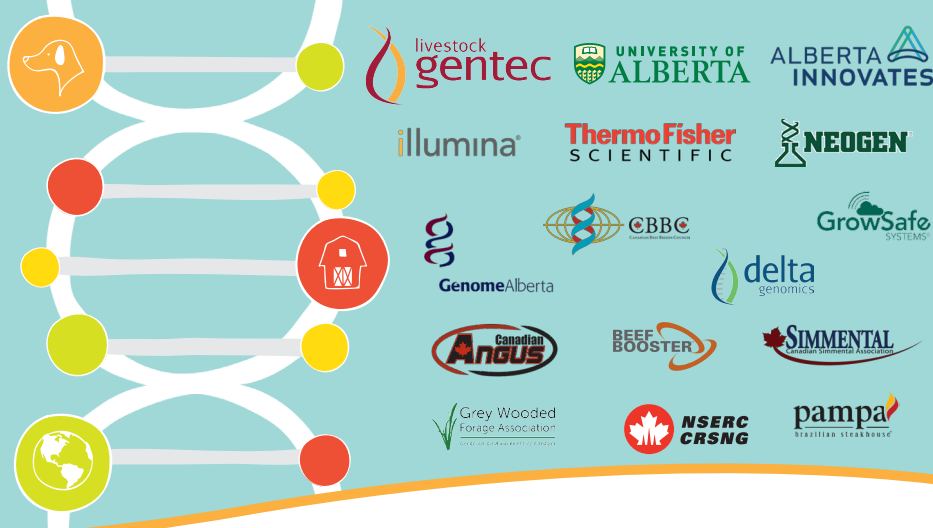
**Rollie Dykstra** is VP Investments at Alberta Innovates. He has over 30 years of experience in the information and communications technology sector and in business development roles, both in industry and government. A former sales executive with NORTEL, TELUS Communications and Williams Communications, Rollie works on business development with high tech companies, helping to move research to commercialization. Rollie focuses on building the knowledge-based sectors of Alberta's economy, primarily in high tech, but also encourages and supports regional innovation throughout the province. Rollie specializes in building the relationships and pursuing research collaborations and business development that accelerate innovation for the province.



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## David Bailey - Overview, Genome Canada Beef, Pork, and Dairy Project Updates

David Bailey obtained his PhD in genetics and animal breeding from the University of Alberta in 1985. He began his career with Agriculture and Agri-Food Canada as a research scientist in Lethbridge, Alberta and was later appointed to management postings as Research Centre Director in Charlottetown, P.E.I. and Lacombe, Alberta before his appointment as Director General in 2003. He has published more than 60 peer-reviewed manuscripts and has received several awards for excellence in research and transferring research into commercialization, including the CSAS's Young Scientist Award and NRC-IRAP's Federal Partners in Technology Transfer. His leadership profile also includes service on a number of advisory boards and committees such as Livestock Gentec (University of Alberta), Manning Innovation Awards Southern Chapter (AB), PrioNet Canada (founding member), and Alberta Prion Research Institute Management Board (founding member). David has also served as an adjunct professor at Texas A&M University, and the University of Calgary (current). David joined Genome Alberta as the President and CEO in April 2006. In less than 10 years he has built the organization into a vibrant and effective team that has partnered with key Alberta sectors to help deliver genomic solutions to real challenges

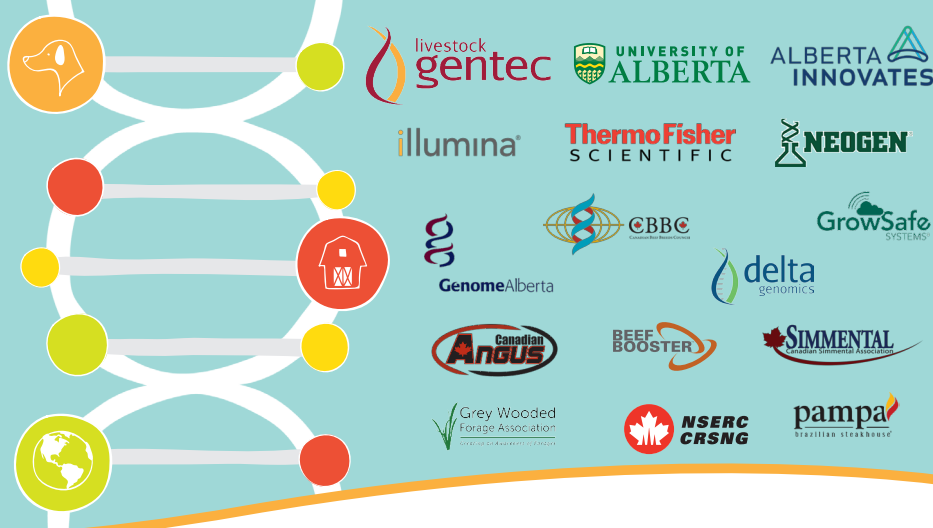
## JP Brouwer - Dairy

Jelle-Pier (JP) Brouwer, producer and Chair, Alberta Milk Research Committee The Brouwer family immigrated to Canada from the Netherlands in 1991. Our family-run dairy farm in Ponoka, AB employs three brothers and our father working together along with a number of employees. We milk 350 lactating cows and are expanding to 450. We use sand-bedded free-stalls for our lactating herd, and a sand reclamation system that recycles and reclaims around 90-95% of the sand. We are under-going renovations to our dry-animal housing to increase their comfort. We milk our animals in a double-16 parallel parlour. He and his siblings were encouraged to pursue life off the farm for a while, so he took a university degree in business. Eventually he came back to the farm and has taken over many management duties from his father, which challenged him to learn and improve from the get-go. There have been many healthy discussions on how to best progress into the future. He is also involved with Alberta Milk, especially on the Research and Extension Advisory Committee. Research has always been a passion. Progress in the industry requires constant new discovery and he looks forward to engaging wherever possible to advance the industry.

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## John Crowley - Beef

John Crowley is Director of Scientific and Industry Advancement with the Canadian Beef Breeds Council (CBBBC), an Adjunct Professor at the University of Alberta, and also takes part in the research activities of Livestock Gentec. Originally from Ireland, John grew up on a mixed dairy and beef operation. He received his PhD in Animal Breeding and Genetics in 2010 from University College Dublin. After working with the Irish Cattle Breeding Federation as a geneticist, he joined Livestock Gentec in 2011. With both CBBBC and Gentec, he undertakes research and applications pertaining to genetic improvement and evaluation, and is involved in projects developing the use of genomics for breeding and management.

## Michael Dyck - Pork

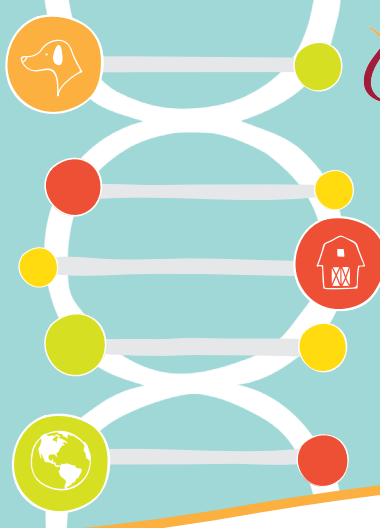
Michael Dyck obtained a B.Sc. (Agri.) with distinction from the University of Manitoba, and pursued graduate studies at the University of Guelph where he obtained a MSc. with a specialization in reproductive physiology. He then went on to work in the field of artificial insemination in swine at First Choice Genetics in Woodstock, Ontario and later at ReproMed Ltd. in Toronto, Canada's largest human sperm banking facility. He enrolled in Laval University's PhD program where he was a FCAR and NSERC Scholar. During his Doctoral training, Mike conducted research into the use of transgenesis to alter physiological traits in swine. On completing his PhD, he joined TGN Biotech Inc., in Quebec City as an NSERC Industrial Research Fellow, and eventually assumed the position of Director of Transgenics and Cell Biology for this company. Mike then joined the Faculty of Agricultural, Life and Environmental Sciences at the University of Alberta in 2004, and has been conducting research focused on the development and application of molecular techniques and reproductive technologies with the pork production industry, to improve breeding efficiency in swine. He was co-lead on the Pan-Canadian NSERC Strategic Research Network "EmbryoGENE" efforts to address the effects of reproductive technologies and maternal factors on embryo quality in swine. He is leading the Genome Canada Large Scale Applied Research Project on the genomics of swine health.



# ONE GENOME ONE HEALTH

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### 1. Hematological Characteristics of Disease Resilient Pigs in a Natural Challenge Model.

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### 2. The effect of energy intake on NPY and POMC gene expression at the onset of lay in broiler breeder pullets

S.H. Hadinia, G.Y. Bédécarrats, C. Fitzsimmons, and M.J. Zuidhof

### 3. Quantifying the yet unknown: Individual phenotypic data for feed efficiency in broiler breeders

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### 4. Can we use residual ruminal volatile fatty acid concentration and microbial populations as a proxy for feed efficiency in beef steers?

P.B. Anusha I.K. Bulumulla, Meng M Li, Yanhong Chen<sup>1</sup>, Fuyong Li, Robin R. White, Mark D. Hanigan, Graham Plastow and Leluo Guan

### 5. Repeatability of maternal productivity of cows selected for post-weaning residual feed intake using molecular breeding values

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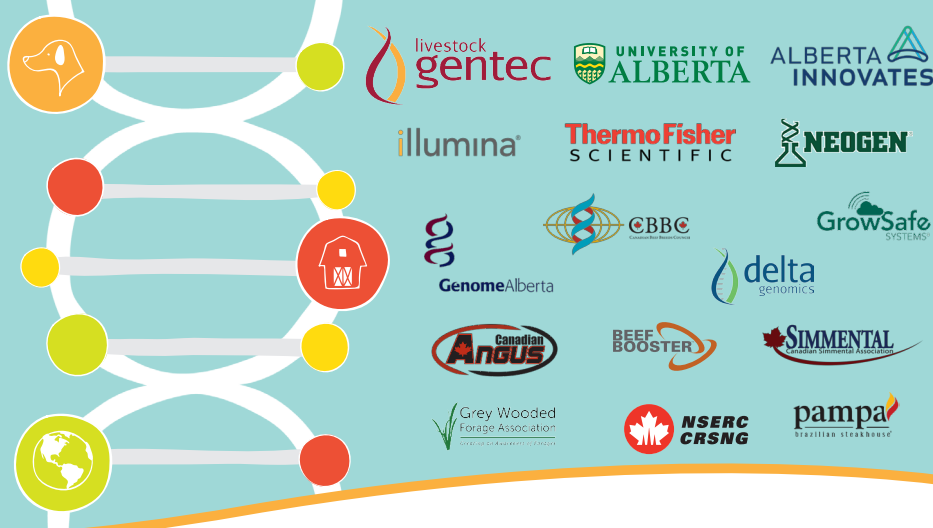
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## **8. Transcriptome analysis of skeletal muscle tissue in Canadian beef cattle with divergent residual feed intake phenotypes**

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## **9. Performance evaluation for feed efficiency and growth in progeny of parents selected for low residual feed intake The “Kinsella Breeding Project”, results following two years of selection**

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