

Dr. Jennifer Aalhus - Meat quality and improving carcass value

Dr. Jennifer Aalhus is a senior meat quality scientist at the Agriculture & Agri-Food Canada (AAFC) Research Centre in Lacombe, Alberta, located in the heart of the livestock industry in Canada. Her 25-year research career has focused on value chain strategies to improve product quality for the Canadian beef, pork and alternate species (e.g. bison, elk, musk-oxen) industries. Dr. Aalhus obtained her Ph.D. from the University of Alberta, and has been an Adjunct Professor at this university for over 15 years, providing research collaboration and scientific mentorship to postdoctoral fellows, graduate and undergraduate students. She has authored over 150 peer-

reviewed publications, over 200 technology transfer articles, and is a frequently sought speaker. Dr. Aalhus has contributed scientific leadership to government, industry and professional organizations and was recognized by industry as an influential Woman in Agriculture, and received an AAFC Gold Harvest Award in 2008, acknowledging her scientific excellence. E-mail: Jennifer.Aalhus@agr.gc.ca



Dr. Reynold Bergen – Industry overview, new opportunities

Reynold provides scientific and industry expertise to the BCRC and Beef Science Cluster, working with industry to identify research priorities, review research proposals and scientific reports, and engaging with industry and research experts on an ongoing basis. To ensure producers have access to current research information, he develops factsheets for projects funded through the BCRC, and writes articles that are available through the CCA, provincial beef organizations, various ag media outlets and www.BeefResearch.ca. Reynold also works to gather and provide relevant research-based information for industry, public and government communications on specific issues. Reynold received a B.S.A and M.Sc. in Animal Science from the University of Saskatchewan, and Ph.D. from the University of Guelph. Reynold has worked as a

technician, research associate and post-doctoral fellow at the universities of Saskatchewan, Manitoba, Guelph,

and AAFC Lethbridge in areas ranging from live-animal carcass evaluation of beef cattle, cold-weather physiology of ruminants, genetics, and feeding behavior, in addition to work in technology transfer and extension with both government and private industry.



Dr. Todd Callaway - Food safety, mitigating pathogens

Dr. Todd R. Callaway grew up on a small horse and beef farm and received his B.S. and M.S. degrees from the University of Georgia in Animal and Dairy Science in 1993 and 1996 respectively. He received his Ph.D. degree from Cornell University in 1999. Dr. Callaway became a permanent scientist with the Agricultural Research Service of the USDA in 2000 and currently serves as a research microbiologist in the Food and Feed Safety Research Unit at the Southern Plains Agricultural Research Center, in College Station, Texas with a mission to reduce food-borne pathogens in animals prior toslaughter. In conjunction with his Federal duties, Dr. Callaway is an adjunct Assistant Professor in the Department of Animal Science at Texas A&M University and at Mississippi State University. Dr. Callaway received the American

Society of Animal Science Early Career Research Award and the USDA/ARS Early Career Scientist of the Year Awards in 2007. Dr. Callaway has published more than 175 refereed journal articles, more than 20 book chapters and 2 books on "Direct Fed Microbials" and "On farm Strategies to Control Foodborne Pathogens".



Dr. Anthony Confer - Bovine respiratory disease, predisposing factors for bacterial pneumonia

Anthony Confer is a Regents Professor and the Walter Sitlington Chair in Food and Fiber Research. He received his DVM degree from Oklahoma State University, 1972, his M.S. in pathology from Ohio State University, 1974, and in 1978 he earned his Ph.D. in microbiology from the University of Missouri. He is board-certified veterinary pathologist by the American College of Veterinary Pathologists. Confer served as Captain, Veterinary Corp, US Air Force from 1974-1976 at the Armed Forces Institute of Pathology and was on faculty at Louisiana State University, 1978-1981. He joined the faculty of Oklahoma State University in 1981. Since that time, his major research interests and focus have been bovine respiratory disease

pathogenesis and immunity, especially related to *Mannheimia haemolytica* and *Pasteurella multocida* infections. His laboratory, in conjunction with Dr. Sahlu Ayalew, is currently focused on the role of outer membrane proteins in stimulating immunity to *M. haemolytica*.

Confer served as a department head from 1986-1999 and again from 2004-2008 and as Associate Dean for Research from 1999-2001. He received the Norden Distinguished Teacher Award in 1987 & 2002, Pfizer Award for Research Excellence in 1988 & 2011, OSU Regents Distinguished Teaching Award in 2008, and the Oklahoma State University Eminent Faculty Award in 2003. Additionally, in 2009 the OSU Center for Veterinary Health Sciences recognized him as a Distinguished Alumnus. Confer also holds the distinction of diplomate, American College of Veterinary Pathologists. He is author or co-author of 207 refereed scientific publications, 124 published abstracts, 13 book chapters, 14 continuing education publications, and four veterinary medical education manuscripts. As Principal Investigator, Confer has obtained more than \$8,000,000 in extramural research funding and, along with Ayalew, he holds two US Patents.



Dr. Bart Lardner - Forage and water management in cow-calf systems

For the past 15 years, Dr. Bart Lardner has worked at Western Beef Development Centre as a scientist focusing on cow-calf management and forage production research. Bart grew up on a beef farm in British Columbia and has been involved with agriculture all his life. Prior to his formal education, Dr. Lardner worked for many years in the cow-calf, feedlot and animal health sectors, thus gaining extensive experience in the beef industry. Dr. Lardner is an Adjunct Professor with the Department of Animal and Poultry Science at the University of Saskatchewan where he supervises undergraduate and graduate students and teaches classes in forages, grazing ruminant nutrition and beef cattle management. In his current research program, Dr. Lardner has advised 40 undergraduate and 22 graduate students on

research activities focusing on improving pasture and rangeland productivity, evaluating new forage cultivars, grazing ruminant nutrition, nutrient management, feed efficiency and intake of forages, rangeland water quality and supply, backgrounding and supplementation strategies to improve cattle performance on pasture and heifer development programs which has resulted in the publication of many scientific manuscripts, popular farm press articles and invited industry and scientific presentations.

Miss Kathy Larson – Industry economics, market stressors

Kathy Larson has been the Western Beef Development Centre's economist since April 2010. One of Kathy's key responsibilities has been to conduct the annual cowcalf cost of production study which provides benchmarks for the Saskatchewan beef industry. In addition to her own beef economics research projects, Larson conducts the economic analysis for Dr. Bart Lardner's and Dr. Paul Jefferson's research projects at the Termuende Research Ranch. Kathy obtained both her Bachelor's and Master's degrees in Agricultural Economics from the University of Saskatchewan. Raised on a mixed purebred beef and grain operation near Francis, Saskatchewan, Kathy now resides with her family in Prince Albert where she works from her home

office.



Dr. Stephen Miller - Genetic drivers of cow-calf profitability

Stephen is the Director of the Centre for the Genetic Improvement of Livestock at the University of Guelph as well as the Industry adoption director with Livestock Gentec at the University of Alberta. Stephen he has been a faculty member in beef cattle genetics at the UoG since 1999 where he has been involved in developing tools for genetic improvement in the beef industry including multi-breed genetic evaluation and economic selection indexes. More recently, Dr. Miller's research has focussed on genomic tools for selection. Dr. Miller's research team has developed a marker for beef tenderness that is being used commercially and the team has been involved in the validation of markers prior to commercial use. Stephen's research focus is

on bringing genomic selection tools to the beef industry with an emphasis on meat quality and efficiency of production, with a major initiative underway to sequence and genotype the most influential animals (>10,000) in the most popular Canadian beef breeds. Stephen received his Ph.D. from the University of Guelph in 1997.



Dr. Greg Penner – Acidosis, mitigation strategies

Greg Penner completed his B.S.A (2004) and M.Sc. (2006) at the University of Saskatchewan, and his Ph.D. at the University of Alberta (2009). In 2009, Greg was hired as an Assistant Professor in Ruminant Nutrition at the University of Saskatchewan. Dr. Penner's research program addresses beef cattle nutrition and physiology, specifically the aim of his research program is to improve the understanding of factors regulating the absorptive and barrier functions of the rumen epithelium. As such, a major focus of his program is to gain an improved understand of risk factors for ruminal acidosis, impacts of ruminal acidosis on beef cattle, and strategies to minimize the risk. Since starting his program at the U of S he has recruited 7 graduate students (2 completed), 2 postdoctoral fellows, and

employs 2 technicians. Greg has authored or co-authored 30 peer-reviewed papers, presented 19 invited talks, has co-authored over 40 abstracts, and was the recipient of the Canadian Society of Animal Science Young Scientist Award in 2012. Greg is also a co-inventor of 2 indwelling ruminal pH measurement systems that have been used extensively to measure rumen pH in pen-fed cattle.



Dr. Karen Schwartzkopf-Genswein – Welfare/management practices to increase production

Dr. Schwartzkopf-Genswein was raised on a farm in southern Alberta that has been active in the feedlot business for over 40 years. She obtained here PhD at the University of Saskatchewan in Applied Animal Ethology in 1996. She worked as a research scientist (Feedlot Specialist) for Alberta Agriculture Food and Rural Development in Lethbridge, AB for 4 years 1999-2002 before taking a research scientist position in Beef Cattle Welfare with Agriculture and Agri-Food Canada in Lethbridge in 2003.

Her research interests include pain/stress assessment and mitigation strategies associated with routine management procedures such as transport, castration, dehorning, and lameness. She has also focused her research in the area of feeding

behaviour of beef cattle as it relates to morbidity including acidosis and respiratory disease. Her research is applied and provides leading edge information for the scientific community as well as training and consultation to feedlot managers, agribusiness and the feedlot industry in Canada and internationally.

She is a technical advisor for the Canadian beef export federation, BC SPCA, and the North American Food Animal Well-Being Commission on issues related to Beef Welfare. She is also an adjunct professor at the University of Saskatchewan, University of Calgary, University of Manitoba and UNESP University in Sao Paulo, Brazil. She provides expert advice to both provincial and federal producer groups on issues related to beef welfare. She is Past President of the Canadian Society of Animal Science and was an associate editor for the Canadian Journal of Animal Science for 6 years 2004-2011. She is currently serving as the co-chair of the Scientist Committee requested by NFAC to revise the Codes of Practice for Beef Cattle. Dr. Schwartzkopf-Genswein is the author of over 100 scientific and industry publications.

Dr. Schwartzkopf-Genswein is married to her husband Bernie. They have 2 children, Ryan and Amanda and they spend much of their time involved with their children's activities.