

Speakers 2020 Florida Ruminant Nutrition Symposium



Dr. Rodrigo C. Bicalho is an Associate Professor of Dairy Production Medicine in the Department of Population and Diagnostic Sciences. He received his D.V.M. degree from the Federal University of Goiás, Brazil. He then completed a clinical residency and the Ph.D. degree at Cornell University. His research interests are diverse and include areas of microbiology, molecular biology, vaccinology, infectious diseases, and immunology. The unifying objective of his research program is to increase the health and the productivity of farm animals, with a particular focus on the dairy cow. His current efforts include the study of the normal and pathogenic microbiota of domestic animals using high-throughput sequencing, using reverse vaccinology approach to develop new vaccines against bacterial diseases of humans and animals, using recombinant cytokines to manipulate the immune system and metabolism of animals to maximize health and

productivity.



Dr. Jackie Boerman is an Assistant Professor in the Department of Animal Sciences at Purdue University. She is originally from a dairy farm in western New York and received her B.Sc. from Cornell University. Jackie received her M.Sc. from the University of Illinois and her Ph.D. degree from Michigan State University focusing on lipid metabolism in dairy cattle. In 2017, Dr. Boerman began an extension/applied research and teaching appointment at Purdue University after working for 2.5 years in industry as a dairy specialist with Cargill Animal Nutrition. Her research and extension programs focus on nutrition and management strategies that promote the production and health of dairy cattle. Specifically, Jackie is interested in understanding variation in tissue mobilization around calving, identifying nutritional, and management changes that optimize both protein and fat mobilization. Additionally, Dr. Boerman has research projects focused on improving on-farm decision making

by utilizing data generated on farms to increase our understanding of animal behavior, growth, health, and production.

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Dr. Barry Bradford is a Professor and the Clint Meadows Chair in Dairy Management in the Department of Animals Sciences at Michigan State University. He completed dual B.Sc. degrees at Iowa State University and a doctorate in animal nutrition at Michigan State University. He served on the faculty at Kansas State University from 2006 to 2019, and in 2020 he returned to Michigan State University. Dr. Bradford's research focuses on dairy cattle nutrition and metabolism, with a particular emphasis on attempting to translate novel findings in fundamental metabolic physiology to practical applications in animal agriculture. Contributions by his group have largely focused on dietary utilization of byproducts in lactation diets, the physiological impacts of systemic postpartum inflammation, and the roles of nutrients as signals.



Dr. Rodolfo C. Cardoso is an Assistant Professor in the Department of Animal Science at Texas A&M University. Dr. Cardoso received his D.V.M. and M.Sc. degrees from São Paulo State University in Brazil, and completed his Ph.D. at Texas A&M University. Dr. Cardoso completed a postdoctoral fellowship in Reproductive Endocrinology at the University of Michigan before joining the Texas A&M University faculty in 2016. His research efforts focus on the impact of prenatal and early postnatal nutrition on reproductive neuroendocrine function in female ruminants. His laboratory integrates whole animal physiology with cellular and molecular biology to elucidate the neuroendocrine mechanisms controlling puberty and to develop managerial strategies for optimal development of replacement heifers.

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Dr. Antonio Faciola is an Assistant Professor in the Department of Animal Sciences at the University of Florida. Prior to joining UF in the summer of 2017, Dr. Faciola served on the faculty at the University of Nevada for 4 years. Antonio received his B.Sc. and M.Sc. degrees in Animal Sciences from the Federal University of Viçosa, Brazil, the Ph.D. degree in Dairy Science from the University of Wisconsin-Madison, and completed a postdoctoral fellowship at the ARS-USDA U.S. Dairy Forage Research Center in Wisconsin. The goal of his laboratory is to further our understanding of ruminant nutrition to improve the efficiency of nutrient utilization in order to enhance production and minimize environmental impact of livestock. Projects include evaluating canola meal as a protein supplement for dairy cows, evaluation of

feedstuffs and determining the nutritional value of different additives for dairy cows. Methodological approaches include the dual-flow continuous culture system and the omasal sampling technique.



Dr. Christiane Girard is a research scientist with Agriculture and Agri-Food Canada at the Sherbrooke Research and Development Centre in Quebec. She received her M.Sc. and Ph.D. degrees from the University of Laval in Quebec. She completed a postdoctoral fellowship at the National Institute for Research in Dairying (NIRD), Shinfield, Reading, Berkshire, England and worked at the INRA in Clermont-Ferrand-Theix, France before returning to Canada. Dr. Girard research focuses on defining B-vitamin requirements of high producing dairy cows to optimize their well-being and metabolic efficiency and defining dietary conditions affecting ruminal synthesis and supply of B-vitamins to dairy cows. More recently, her work has been focusing on the metabolic

interactions between folic acid and vitamin B12 and characterizing the effects of dairy cow nutrition on milk nutritional quality, especially milk concentrations of vitamin B12.

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Dr. Kevin Harvatine is an Associate Professor of Nutritional Physiology at Penn State University. He grew up on a dairy farm in Pennsylvania and received his B.Sc. in Animal Science from Penn State. He earned an M.Sc. from Michigan State University and the Ph.D. degree from Cornell University. He was appointed as an Assistant Professor at Penn State in 2009 and was promoted to Associate Professor in 2015. Dr. Harvatine's research is focused on the nutritional regulation of milk synthesis. Harvatine's goal is to identify bioactive factors and nutritional strategies to improve animal production, efficiency, and health. His research spans from applied nutrition to basic biology and provides both real-world applications to the dairy industry and a basic understanding of biological mechanisms. His current research program focuses on investigating the nutritional regulation of milk fat synthesis, fatty acid metabolism, and circadian regulation of intake and mammary metabolism.



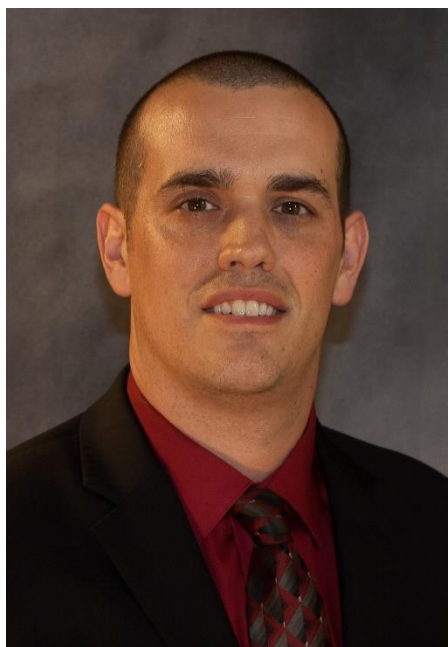
Dr. Peter J. Hansen is a Distinguished Professor and L.E. "Red" Larson Professor of Animal Sciences at the University of Florida. He received the B.Sc. in Agricultural Sciences from the University of Illinois and the M.Sc. and Ph.D. degrees from the University of Wisconsin. He did a postdoctoral fellowship at the University of Florida from 1983-1984 before joining the faculty at Florida as an Assistant Professor in 1984. Hansen's research focuses on the biology of pregnancy and embryonic survival and development of methods to improve fertility and assisted reproductive technologies in livestock, particularly dairy cattle. Particular emphasis is placed on elucidating effects of elevated temperature on pregnancy, characterizing the nature of maternal control of early embryonic development and identifying genes controlling embryonic survival and fertility. In addition, work is underway to develop methods to improve dairy cow fertility during heat stress and to increase profitable uses of embryo transfer.

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Dr. Tom Jenkins attended Penn State University for his B.Sc. and M.Sc. degrees, and received the Ph.D. degree at Cornell University. After a postdoctorate at The Ohio State University, he moved to Clemson University where he continued to work on dairy cattle nutrition for over 30 years. Dr. Jenkins taught undergraduate and graduate courses in nutrition and coordinated a research program on use of fat in diets for dairy cattle including basic work on rumen lipid metabolism. He has published extensively in scientific journals and conference proceedings, and has given numerous invited presentations across more than a dozen countries on lipid metabolism in dairy cattle and the practical aspects of fat feeding. Dr. Jenkins has received numerous awards from Clemson University

and The American Dairy Association for his research accomplishments in rumen lipid metabolism.



Dr. Joseph W. McFadden is an Assistant Professor and the Northeast Agribusiness and Feed Alliance Faculty Fellow in Dairy Cattle Biology in the Department of Animal Science at Cornell University. He received his B.Sc. degree in Animal Science from Cornell University, the M.Sc. degree in Animal Science from the University of Illinois and the Ph.D. degree in Dairy Science from Virginia Tech. He completed a postdoctoral fellowship in the Department of Neuroscience and the Center for Metabolism and Obesity Research at Johns Hopkins University. In 2012, he joined the faculty in the Division of Animal and Nutritional Sciences at West Virginia University as an Assistant Professor of biochemistry. Dr. McFadden joined Cornell University in 2017. His scientific interests involve lipid biology in dairy cattle. His areas of interest include defining the role of sphingolipids in mediating insulin resistance and milk production

efficiency, developing methyl donor and fatty acid feeding regimens that enhance postpartum liver health, exploring the role of complex lipids within the context of gut health and immune function, and identifying practical approaches to enhance fatty acid digestibility in dairy cattle.

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Dr. Philippe Moriel is an Assistant Professor in the Range Cattle Research & Education Center at the University of Florida. He received his B.Sc. from São Paulo State University, Brazil, the M.Sc. degree in Animal and Veterinary Sciences from University of Wyoming, and the Ph.D. degree in Ruminant Nutrition from the University of Florida. Dr. Moriel worked as an Assistant Professor at North Carolina State University from 2013 to 2016. His research program focuses on developing and implementing nutritional strategies specifically tailored to enhance the productivity of beef cattle adapted to tropical and subtropical environments. More specifically, Dr. Moriel focuses on pre- and post-weaning nutritional strategies for stressed beef calves and replacement beef heifers, fetal-programming, and early-postnatal nutritional manipulations of calf metabolism to subsequently modulate the growth, health, and reproductive success of *Bos indicus*-influenced beef cattle.



Dr. Thomas R. Overton is a professor and chair of the Department of Animal Science at Cornell University. Tom received his Ph.D. degree in dairy cattle nutrition and metabolism from University of Illinois. Tom is recognized nationally and internationally for his research and extension efforts relating to metabolism, immune function, and nutritional physiology of the transition cow and his work on milk component production in cows. He serves as Director of the PRO-DAIRY program at Cornell, and as Associate Director of Cornell Cooperative Extension works with statewide and regional extension teams within New York to enhance the dairy and agricultural industries in New York State. He teaches the applied dairy cattle nutrition course for undergraduates and co-teaches a course in dairy nutrition for veterinary students.

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Dr. Michael Steele is an Associate Professor and NSERC Industrial Research Chair at the University of Guelph and the Past-President of the Canadian Society of Animal Science (CSAS). He completed his Ph.D. at the University of Guelph and worked for Nutreco Canada Agresearch for 2 years prior to returning to academia at the University of Alberta and Guelph as an NSERC Industrial Research Chair. He was recently awarded the CSAS Young Scientist Award, the Cargill Young Animal Nutritionist Award, the Lallemand Award for Excellence in Dairy Nutrition Research and the American Society of Animal Science Early Researcher Award. His current research is focuses on the mechanisms that control gastrointestinal health and development in cattle



Dr. William (Bill) W. Thatcher is a Graduate Research Professor Emeritus in the Department of Animal Sciences at the University of Florida. Bill received his B.Sc. from the University of Maryland, the M.Sc. degree from a joint program between the University of Maryland and the USDA in Beltsville, and the Ph.D. degree in physiology of lactation and reproduction from Michigan State University. His research program in cattle involves ovarian follicular development, maternal-embryo interactions, and developmental approaches for regulating reproductive function to enhance production and health. Major focus has been dealing with effects of the postpartum period, nutrition, and heat stress on ovarian follicular and corpus luteum functions and embryo survival.

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Dr. Pedro Veiga is a Global Technology Manager for Beef Cattle in Cargill Animal Nutrition. He earned his Ph.D. from the University of California, Davis and the Federal University of Viçosa in beef cattle nutrition. His Ph.D. work focused on nutrient requirements of *Bos indicus* cattle. Dr. Veiga acquired his postdoctoral experience at Iowa State University where he worked in the areas of animal growth physiology and meat science. He was a faculty member in the Department of Animal Sciences at the Federal University of Viçosa before joining Cargill Animal Nutrition. At Cargill, he provides technical services and works on research and development focusing on cow/calf production systems and supplementation strategies, and stocker and feedlot nutrition mainly in tropical areas.



Dr. Diwakar Vyas is an Assistant Professor of Ruminant Nutrition in the Department of Animal Sciences at the University of Florida. He earned his Ph.D. from the University of Maryland in Dairy Cattle Nutrition. His Ph.D. work was focused on the mammary lipid metabolism. Dr. Vyas completed a postdoctoral fellowship at Lethbridge Research and Education Center of Agriculture and Agri-Food Canada where he worked in areas of environmental sustainability and rumen physiology of beef production systems. At present, his research program is focused on optimizing the inclusion of feed additives for improving economic and environmental sustainability of dairy production systems.