The annual Awards Program of the American Dairy Science Association was held on June 21, 2022. The association greatly appreciates the continued generosity and support of the donors in presenting the annual awards to ADSA members.

**Miguel Chirivi**  
**2022 Alltech Inc. Graduate Student Paper Publication Award**

Miguel Chirivi is a doctor of veterinary medicine who, at a very early age, discovered his passion for dairy farming. Chirivi grew up in Bojacá, Colombia, a small, agriculture-based town located 20 miles west of Bogotá. Throughout his childhood and adolescence, he spent his free time learning about farming on his father’s dairy and swine operations. Driven by his desire to positively contribute to the development of his family’s and nation’s dairy industry, Chirivi started veterinary school in 2012 at the Universidad Nacional de Colombia, where he was awarded tuition exemption for academic excellence. Because Chirivi’s experience had been dairy centered, he decided to explore research and joined various research groups at the veterinary college, including diagnostic pathology, swine virology, and large animal theriogenology. The experiences obtained throughout his time in these research laboratories were the turning point at which Chirivi set his sights on a research career focused on the health and production of dairy cows.

In 2018 Chirivi received his DVM and began an internship in Daniel MacPhee’s laboratory at the Western College of Veterinary Medicine at the University of Saskatchewan in Canada. Here, Chirivi received training and gained experience in molecular biology techniques, which guided his research toward the expression of placental heat-shock proteins as they pertain to homeostatic maintenance of the mammal’s gravid myometrium. After six months, he returned to Colombia and spent a year practicing veterinary medicine on grazing dairy farms. He then moved to the United States and joined the Contreras laboratory at Michigan State University as a visiting scholar. In the fall of 2019, Chirivi began his PhD studies in comparative medicine and integrative biology at the College of Veterinary Medicine at Michigan State University under the supervision of Contreras. Chirivi’s research has primarily focused on adipose tissue fatty acid mobilization (lipolysis) in dairy cows. As fatty acids are mobilized from adipose tissue during the early postpartum period, the magnitude and persistence of lipolysis increases the cow’s risk for developing disease. Since beginning his PhD studies, he has presented the results of his research at 12 national and international conferences. In 2021 the Contreras laboratory research group demonstrated that endotoxin triggers both classic and inflammatory lipolytic pathways in bovine adipose tissue, and Chirivi was the first author of this publication in JDS. Additionally, Chirivi has published two peer-reviewed original research manuscripts. Chirivi is co-principal investigator of two grants that fund his research on lipolysis and ketosis in dairy cows. Thus far in his predoctoral journey, he has mentored and trained undergraduate students in laboratory techniques. His current research involves characterizing the molecular process of endotoxin-mediated lipolysis in bovine adipocytes and identifying cellular targets that may aid in reducing excessive lipolysis in cows with clinical ketosis. Understanding the complex processes involved with inflammatory-mediated dysregulation of lipolysis has great potential to improve the productive performance of dairy cows—a challenge that Chirivi has accepted.

**Chris Reynolds**  
**2022 American Feed Industry Association Award**

Chris Reynolds is professor of animal and dairy science and director of the Centre for Dairy Research (CEDAR) at the University of Reading. Educated at the University of Tennessee, he gained his PhD in animal science in 1984. He then worked as a USDA-
Agricultural Research Service research scientist in the Ruminant Nutrition Laboratory at the Beltsville Agricultural Research Center in Maryland until moving to the University of Reading in 1993. He then spent four years as an associate professor at The Ohio State University before returning to the University of Reading in 2006. His research has primarily focused on the nutritional physiology of ruminants in relation to energy and protein metabolism. Recent research themes include the effects of milk and meat composition on consumer health, the management of ruminants to reduce environmental impacts of milk and meat production, and the use of legumes and multispecies swards to improve the sustainability and resilience of ruminant production systems. Reynolds is a past president of the British Grassland Society and a long-standing member of the American Dairy Science Association, the American Society of Animal Science, the British Society of Animal Science, and the American Society for Nutrition. His research has previously been recognized by the American Dairy Science Association Young Scientist Award (1994), the British Society of Animal Science Sir John Hammond Award (2000), and the American Society of Animal Science American Feed Industry Award (2003). He is also recipient of an Honorary Professorship in Ruminant Sciences from SRUC, Scotland’s Rural College.

Over the course of his career Reynolds’s research has become increasingly wholistic and systems based, addressing some of the major challenges for animal agriculture, including the large amount of methane produced by rumen microbes; the relatively low efficiency of dietary nitrogen utilization in ruminants; and the large contribution of nitrogen in ruminant livestock excreta to nitrous oxide, ammonia, and nitrate emission inventories. This research has included numerous long-term, multisite, collaborative projects on reducing greenhouse gas emissions from animal agriculture and improving the efficiency of N utilization in ruminant production systems, with a focus on dietary and other management strategies for reducing methane emissions and improving the efficiency of N utilization in dairy production systems. Recent projects include multidisciplinary (animal, plant, and soil science; agronomy; environmental and economic modeling) research on the use of legumes and multispecies swards for ruminant production systems to reduce reliance on N fertilizer and improve resilience to climate change, soil health and fertility, animal nutrition and health, and biodiversity. In addition, Reynolds led a multisite, long-term project on improving the efficiency of protein utilization in dairy production systems that included a trial examining the effects of incremental reductions in dietary protein supply over multiple lactations. Recent research collaborations have extended to the use of novel analytical approaches and remote sensing for monitoring forage biomass and composition in situ, diet quality, and animal health using satellite or handheld spectral data and image analysis, as well as the use of high-throughput mass spectrometry analysis of milk and other biofluids for early detection of mastitis and other diseases.

Ángel Abuelo

2022 Cargill Animal Nutrition Young Scientist Award

Ángel Abuelo grew up in a family with strong ties to the dairy industry. He obtained his veterinary (2010), MRes (2011), and PhD (2015) degrees with honors from the University of Santiago de Compostela (Spain) and an MS in veterinary education (2015) from the Royal Veterinary College, University of London (UK). He is a Diplomate of the American Board of Veterinary Practitioners (Dairy Practice Specialty) and the European College of Bovine Health Management and an Associate Diplomate of the American College of Veterinary Internal Medicine (Large Animal). Abuelo has been an assistant professor of cattle health and the dairy extension veterinarian at the Michigan State University (MSU) College of Veterinary Medicine since December 2017, which followed his appointment as a senior lecturer at Charles Sturt University (Australia) from July 2015 to December 2017.

His research focuses on strategies to enhance immunity during the neonatal and periparturient periods in dairy cattle. He is internationally recognized for his work on oxidative stress in cattle and calves. His group currently focuses on practical strategies to improve redox status in cattle to improve host resilience during stages of increased disease risk. Further demonstrating his versatility as a veterinary scientist, Abuelo is also exploring strategies to improve vaccination protocols.
and responsiveness to dairy cattle’s endemic and emergent pathogens. At MSU, he maintains federally funded research and extension programs, for which he has secured more than $4.3 million as the principal investigator (PI) or co-PI. This funding has come from USDA National Institute of Food and Agriculture (NIFA), the Michigan Alliance for Animal Agriculture, foundations, and contracts with industry. Abuelo has published 49 peer-reviewed articles and delivered 25 invited presentations across 12 countries. He is also an avid peer reviewer, serving as editorial board member for six international journals (including Journal of Dairy Science and JDS Communications) and the Merck Veterinary Manual. Abuelo has also been very active in service to the profession through participation in key committees of veterinary specialty boards and professional associations such as ADSA, the American Association of Veterinary Immunologists, and the American and Michigan Veterinary Medical Associations.

Abuelo is dedicated to student education. He has served as primary mentor for six graduate student programs, one postdoc, and two visiting scholars and has advised the research experience of 13 veterinary students. He is the faculty advisor to the MSU student chapter of the American Association of Bovine Practitioners and the director of the MSU Summer Food Systems Fellowship Program, and he teaches an advanced dairy production medicine clinical rotation to final-year veterinary students. Abuelo also coordinates a two-year training program funded by USDA-NIFA for early-career bovine veterinarians with collaborators from MSU, Cornell University, and the University of Wisconsin–Madison. Abuelo received the 2014 Sir Kenneth Blaxter Award from the British Society for Animal Science.

José Eduardo P. Santos
2022 DeLaval Dairy Extension Award

José Eduardo P. Santos is a research foundation professor in the Department of Animal Sciences at the University of Florida. He obtained his DVM degree (1992) from São Paulo State University in Botucatu, Brazil. After one year in dairy practice, he moved to the United States to complete his MS (1995) and PhD (1997) degrees at the University of Arizona and a clinical residency in dairy production medicine (2000) at the University of California–Davis. He completed a sabbatical (2017) at SBSScibus and the University of Sydney in Camden, Australia. Santos spent eight years on the faculty of the School of Veterinary Medicine at UC Davis before moving to the University of Florida in 2008, where he conducts research and extension in dairy cattle nutrition, health, and reproduction. Santos has authored and coauthored 257 scientific manuscripts, 269 scientific abstracts, and 16 book chapters. He has delivered over 450 presentations in 22 countries. He has received over $12 million in funding to support research and extension programs. Santos has a deep commitment to education of dairy professionals that has resulted in, among other accomplishments, supervision of the graduate programs of 21 PhD and 23 MS students, in addition to over 120 undergraduate and graduate visiting students who spent time in his laboratory.

An important aspect of Santos’s program has been education activities to extend knowledge generated in his research program to address nutritional, health, and reproductive problems of dairy cattle to benefit the dairy industry. He has partnered with multiple feed and animal health industries to present results of his research in technical and scientific events. He has emphasized training of the new generation of animal scientists and dairy veterinarians. Part of his extension program supports nutritional decisions on dairy farms, development of nutritional strategies to improve postpartum cow health, reproductive performance, and efficiency of nutrient utilization to improve productive performance. Extension programs led by Santos include the Florida Ruminant Nutrition Symposium, the Florida/Georgia Corn Silage and Forage Field Day, and the Florida Dairy Production Conference. In addition, Santos is one of a team of educators who have contributed to the Florida International Dairy Academy, a continuing education program that brings the latest information to professionals in dairy sciences. His efforts in extending knowledge have led him to organize and participate in several yearlong continuing education programs in Brazil, Spain, and Argentina. A component of Santos’s extension efforts has focused on week-long training programs for practicing veterinarians, students, and dairy producers. This has been an effort between his group and organized groups of veterinarians from Brazil, Argentina, Japan, Mexico, Chile, and Spain, with formal
sessions and farm visits in the United States. His work in collaboration with that of colleagues and leaders in the industry established the Dairy Cattle Reproduction Council in 2006, an institution of which he was the president for the first two years.

Deborah Grusenmeyer
2022 Hoard’s Dairyman Youth Development Award

Deborah Grusenmeyer is the Pro-Dairy youth specialist and a senior extension associate in the Department of Animal Science at Cornell University. She provides leadership for developing, coordinating, and implementing state-level dairy youth programs for New York to give youth the opportunity to network, build knowledge, and explore interest in the dairy field. Each year she coordinates the state’s 4-H Dairy Quiz Bowl, 4-H Dairy Judging, and 4-H Dairy Challenge contest, attracting up to 200 participants for each of these events. In addition to coordinating these events, she organizes the 4-H dairy teams to represent New York at national events and has coached the 4-H Dairy Quiz Bowl team since 2005, winning eight national championships. She also serves as the dairy youth superintendent at the New York State Fair, hosting educational events and youth dairy shows.

She also extends her youth outreach with noncompetitive educational events yearly with the New York State Dairy Discovery program and Animal Crackers–Dairy Track. Dairy Discovery is a popular 1.5-day program with hands-on learning about dairy cattle and production management. Youth are actively involved in learning skills and knowledge in production agriculture and are able to connect the information and skills to real-life situations, which could be on their home farm, a farm they work at, or just in an area of interest they want to learn more about within the dairy field.

Grusenmeyer is also the developer and director of the innovative and merit-award-winning New York State Junior Dairy Leader Program (flagship program), which is a yearlong program designed for youth between the ages of 16 and 19 who have interest in exploring careers in the dairy industry while building leadership skills, along with personal, professional, and career planning. She also developed the New York State Beginning Dairy Leader program (for youth in tenth grade up to seniors in high school), where youth learn about career planning in dairy and agriculture while visiting primary agricultural and technical colleges. Over the past 23 years, there have been more than 600 graduates from these selective programs.

Beyond opportunities for dairy-interested youth in New York, she has been on the Planning Committee for the National 4-H Dairy Conference for 20 years. As part of the Executive Committee, she helps to coordinate the annual event held in Wisconsin for over 200 youth from across the United States and Canada. She has taken more than 500 young people to this event of a lifetime for many, giving them the experience of a global industry and making worldly connections.

Furthermore, Grusenmeyer serves as a mentor for the undergraduate students, offering career, class, and personal advice while connecting them to the dairy field. She became the faculty advisor for the Professional Women in Agriculture Sorority, Sigma Alpha, in 2013, and she was selected as Sigma Alpha National Sorority Advisor of the Year in 2014, 2015, 2018, 2020, and 2021.

Finally, Grusenmeyer received over $590,000 in funds to assist in providing these educational, career-exposure, and personal-growth programs for young people.

Diarmuid (JJ) Sheehan
2022 International Dairy Foods Association Research Award in Dairy Foods Processing

Diarmuid (JJ) Sheehan holds a number of key leadership positions across a range of both international and national initiatives and is a senior scientist at the Teagasc Food Research Centre, Moorepark, Ireland. He is a graduate of University College Cork with a BS in food science and technology, MS in food technology, PhD in food chemistry, and Diploma in Leadership from the Irish Management Institute.

Sheehan, left, Jerry Bowman, ADSA executive director, right (donor representative).

Sheehan originally came from a background in technology transfer and has extensive experience in translation of research to commercial application. From 2010
to 2015, he was a program manager for a public-private partnership focused on translating research outputs to the commercial sphere, and he oversaw development of a range of products including translation of market concepts to commercial launch and licensing of confidential technologies to the dairy processing industry.

In his field of research, Sheehan has published over 85 peer-reviewed papers and book chapters; delivered over 100 presentations at international scientific conferences; and previously supervised a number of MS students, 9 PhD students, and 10 postdoctoral fellows, with his current research team extending to 12. He is acknowledged as a leading expert in cheese research, having continuously been within the top five internationally published researchers in that field since 2007. He has thus far attracted €5.96 million in direct research projects, and his research is currently focused on areas including the following: dairy food structure-function and its influence on health properties; food structuring through casein-polymer interactions; opportunities in Asia for dairy; cheese structure and function properties; micellar casein concentrates; physicochemical influences on bacterial metabolic activity within food matrixes; reducing carbon footprint/GHG emissions in cheese production; small solute entrapment and diffusivity within dairy matrixes; and developing adaptive strategies to address processing challenges associated with a seasonal milk supply.

Key among Sheehan’s current activities is his role as the principal scientific lead for research focus area one in the Irish national initiative: the Dairy Processing Technology Centre. The Dairy Processing Technology Centre is an industry-led center that comprises seven leading dairy companies and seven research-providing institutions and universities joined as a virtual center pursuing a multidisciplinary approach to address common sectoral challenges to the dairy processing industry. Similarly, Sheehan is a principal investigator with the Food Health Ireland Technology Centre with a specific focus on unraveling the underlying mechanisms of “the cheese matrix effect.”

Internationally, Sheehan is chair of the Standing Committee on Dairy Science and Technology for the International Dairy Federation, has served on the organizing committee for Dairy Science and Technology for a number of International Dairy Federation World Dairy Summits, and is also actively involved in a number of cross discipline action teams covering emerging issues of concern. Between 2018 and 2021 he served as an associate editor for the International Journal of Dairy Technology.

Sheehan is a strong supporter of ADSA and co-organized two ADSA-Teagasc one-day symposia held in Pittsburgh, Pennsylvania (June 2017), and Cincinnati, Ohio (June 2019), to showcase international dairy research activities to a US audience.

George Liu

2022 J. L. Lush Award in Animal Breeding

George Liu is a research biologist in the Animal Genomics and Improvement Laboratory (AGIL), Agricultural Research Service (ARS), USDA, at the Beltsville Agricultural Research Center in Beltsville, Maryland. He earned his BS and MS degrees from Nankai University in China and completed his PhD and postdoctoral training at Case Western Reserve University. After joining the USDA in 2005, Liu has been conducting fundamental genomics research to improve the health and production of cattle and small ruminants and methods for the genetic and genomic evaluation of economically important traits. He made contributions to the dairy industry by improving cattle and goat reference genome assemblies and developing tools and resources to fully annotate livestock genomes and understand their functions.

Liu developed the first genome-wide maps for copy number variation, DNA methylation, functional annotation, recombination, and expression quantitative trait loci in livestock. Liu co-founded the Farm Genotype-Tissue Expression (FarmGTEx) Consortium. His cattle gene atlas and cattle GTEx results directly linked tissues, genes, and single nucleotide polymorphisms (SNPs) for the first time and provided an important tool to improve genome assembly, annotation, selection, and editing. Liu participated in numerous grant review panels, organized meetings as a committee member or chair, and held leadership roles in the Bovine and Water Buffalo Genome Sequencing Consortia. His accomplishments are documented in 105 peer-reviewed articles (63 as senior or first author), 3 conference proceeding papers, 9 book chapters, and 96 abstracts (80 as senior or first author) over the past 10 years. According to Google Scholar, his papers have had 11,328 citations.
citations with a 45 h-index. His recognized expertise in livestock genomics and bioinformatics has resulted in 36 invited talks at national and international scientific meetings. He was the senior or sole principal investigator for eight competitive grants, including five from the USDA National Institute of Food and Agriculture’s Agriculture and Food Research Initiative and three from the US-Israel Binational Agricultural Research and Development (BARD) Fund, two USDA cooperative research and development agreements, and four USDA postdoctoral fellowships, bringing over $3 million in outside funding for AGIL. Furthermore, Liu has helped address social justice initiatives, particularly the lack of women and ethnic minorities in science careers. As an adjunct professor in the Department of Animal and Avian Sciences at the University of Maryland, Liu gave advice and served on graduate committees for one MS and six PhD students. Within USDA ARS, Liu has hosted 9 local high school students, 4 undergraduate students, 6 graduate students, 12 postdocs, and 7 visiting scientists. Almost half of them were women and ethnic minorities. His contributions are documented by a few of the following award, recognition, and citation examples: USDA ARS Beltsville Area Early Career Research Scientist Award in 2010, one team recognition by BARD in 2020, two team recognitions by Nature as milestones in genomic sequencing for the past 20 years in 2021, and one citation by the FY 2022 President’s budget request to Congress.

Joao Costa
2022 Lallemand Forward Award for Scientific Excellence in Dairy Nutrition

Joao Costa has been an assistant professor at the University of Kentucky since 2017. Costa obtained his bachelor’s degree (2009) and MS degree (2012) at the Federal University of Santa Catarina, Brazil, and his PhD from the University of British Columbia, Canada (2015). Currently, Costa has a large research program investigating applied nutrition and feeding behavior of dairy calves and heifers, animal welfare metrics and measurement of animal welfare on farm, health- and management-decision support tools using dairy precision tools, precision nutrition algorithm and management tool development, and basic animal behavior science. His research program employs a variety of research methods across several scientific fields, including ruminant nutrition, in vivo studies, behavioral observations, precision technology, and developmental biology.

Costa has authored more than 50 peer-reviewed scientific articles, 100 abstracts for scientific conferences, a book, and 3 book chapters, and he has presented 52 national and international invited talks in 13 countries.

Angel Aguilar with Lallemand, left (donor representative), Costa, right.

One of his highest accomplishments at the University of Kentucky has been the development of a research group that has led the field in the use of precision dairy technologies for the management of dairy calves, especially in the development and use of algorithms and decision-making on farm. These research interests especially focus on the development, validation, and use of technologies, sensors, and algorithms to automate or support nutritional management decisions on an individual basis. His cutting-edge research program in precision dairy nutrition and management has used experimental models that address practical industry problems, including weaning strategies for dairy calves and how to minimize its effects, the influence of conspecifics in feeding behavior development, and the development of nutritional interventions for animals in need, particularly those at risk for disease, ruminal acidosis, and low feed intake problems. One of the key problems that his group has tackled is that nutritional management of dairy cows and calves has traditionally been directed at the average animal, with large variability in results. With a movement toward individual-based and data-driven dairy farm management systems, there are more opportunities to make informed decisions at the individual level.

Bethany Dado-Senn
2022 National Milk Producers Federation Richard M. Hoyt Award

Bethany Dado-Senn is originally from northwestern Wisconsin, where she grew up on her family’s 500-cow dairy farm. She received her BS in dairy science at the University of Wisconsin–Madison in 2016 and MS in animal molecular and cellular biology at the University of Florida in 2018. Dado-Senn recently earned her PhD in dairy science from the University of Wisconsin–Madison in 2022, specializing in lactation physiology under the guidance of Jimena Laporta.

Her research investigates consequences and solutions to environmental heat stress in the late-gestation cow.
and her calf with three primary objectives: (1) determine the effect of elevated ambient temperatures on mammary growth and development, (2) develop best practices for heat-stress detection in nonlactating dairy cattle, and (3) explore innovative solutions to combat heat stress in dairy youngstock.

Dado-Senn’s research contributes to understanding the molecular and physiological underpinnings of reduced milk yield following dry period heat stress. Alongside Amy Skibiel, Dado-Senn investigated the lactating mammary gland after late-gestation heat stress and reported fewer alveoli (i.e., milk-producing structures), reduced milk protein output, and altered amino acid transporter and mTOR pathway gene expression in heat-stressed dams.

Another hallmark of late-gestation heat stress is a reduction in offspring milk production upon entering the lactating herd. Dado-Senn’s work, as part of a USDA National Institute of Food and Agriculture grant awarded to Jimena Laporta, has filled a crucial gap in understanding the effects of prenatal hyperthermia on early-life mammary development that likely contributes to lower milk yields at maturity. She determined that in utero heat stress limits the growth of specific organ systems (i.e., ovaries, thyroid gland, spleen, and mammary gland) in heifer calves at birth or weaning. Furthermore, data indicate that prenatal heat stress severely limits mammary parenchyma (i.e., future synthetic tissue) ductal development and cellular proliferation in early life. This work will encourage the adoption of heat stress abatement technologies in late-gestation dams to promote productivity in both dam and offspring.

With less focus on mitigating postnatal calf hyperthermia, Dado-Senn saw a need to establish indicators and thresholds for heat stress in preweaned dairy calves in different regions. In collaboration with Veronique Ouellet, Dado-Senn determined correlations between calf animal-based and environmental thermal indices in both subtropical and continental climates. They established breakpoints around a temperature-humidity index of 69 (continental) and 65 to 67 (subtropical) at which calf respiration rates and rectal temperature begin to rise, which has practical implications for improved monitoring of heat stress in preweaned dairy calves.

A key priority for Dado-Senn is highlighting practical solutions for heat abatement in dairy youngstock. Dado-Senn and her research cohort were one of the first to demonstrate that providing fans to group-housed, preweaned dairy calves is effective in promoting thermoregulatory physiology and behavior and improving feed intake. Her most recent work investigates similar forced ventilation for individually hutch-housed calves. Dado-Senn looks forward to applying this comprehensive research background in industry, working alongside dairy professionals to identify key opportunities and solutions for best practices in youngstock.

José Eduardo P. Santos
2022 Nutrition Professionals Inc. Applied Dairy Nutrition Award

José Eduardo P. Santos is a research foundation professor in the Department of Animal Sciences at the University of Florida. He obtained his DVM degree (1992) from São Paulo State University in Botucatu, Brazil. After one year in dairy practice, he moved to the United States to complete his MS (1995) and PhD (1997) degrees at the University of Arizona and a clinical residency in dairy production medicine (2000) at the University of California, Davis. In 2017 he completed a sabbatical at SBScibus and the University of Sydney in Camden, Australia. Santos spent eight years on the faculty in the School of Veterinary Medicine at the University of California, Davis, before moving to the University of Florida in 2008, where he conducts research and extension in dairy cattle nutrition, health, and reproduction. Santos has authored and coauthored 257 scientific manuscripts, 269 scientific abstracts, and 16 book chapters. He has delivered over 450 presentations in 22 countries. He has received over $12 million in funding to support research and extension programs. Santos has a deep commitment to education of dairy professionals that has resulted in, among other accomplishments, supervision of the graduate programs of 21 PhD and 23 MS students, in addition to over 120 undergraduate and graduate visiting students who spent time in his laboratory.

The focus of Santos’s research has been on nutritional methods to improve health and reproduction in dairy cattle. The ultimate goal is to increase production efficiency in dairy farms by better understanding how nutrients influence mechanisms that affect health, production, and reproduction. His research is highly...
integrative, combining components of basic cellular biology, whole-animal physiology with relevance to dairy cattle nutrition, metabolism, health, and reproduction, resulting in applied interventions that are adopted by dairy producers. Santos uses quantitative approaches to expand our understanding of how interventions affect dairy cows. As examples, his early work showed the importance of the amino acid profile of undegraded protein sources when replacing soybean meal. Using meta-analytic approaches, he showed that prepartum nulliparous cows require larger amounts of metabolizable protein compared with parous cows; however, he also showed that parous cows benefit from prepartum acidogenic diets that reduce the risk of diseases and increase productive performance, a response not observed in nulliparous cows. Santos’s work on fatty acid nutrition involved characterization of detailed physiological responses showing that essential fatty acids of the n-3 and n-6 families play important roles controlling corpus luteum lifespan, embryo development, and establishment and maintenance of pregnancy in dairy cattle. His recent work on diet-induced metabolic acidosis has characterized some of the mechanisms by which acidogenic diets prevent hypocalcemia in dairy cows and the interplay between acidogenic diets and source of vitamin D in prepartum cows. His effort on applied dairy cattle nutrition integrates his research program with his extension and education efforts, allowing him to transfer new knowledge directly to nutritionists, veterinarians, allied industry professionals, and producers.

Maurice L. Eastridge

2022 Purina Animal Nutrition Teaching Award in Dairy Production

Maurice L. Eastridge, professor, has been on the faculty in the Department of Animal Sciences at The Ohio State University since March 1986. His role in teaching has included the development of a course to introduce students to the dairy industry, teaching dairy laboratories in the Introduction to Animal Sciences course, teaching nutrition and feeding management to upper-level undergraduate and veterinary students, and teaching the Dairy Cattle Production course. He was instrumental in developing a dairy certificate program, dairy science minor, and a dairy study abroad program to the Netherlands, Belgium, and Germany at Ohio State, and since 2007 he has led groups of students on four trips for the program. He has provided leadership to the Ohio Dairy Challenge annual program for many years, and since 2003 he has coached teams for participation in the regional and national levels of Dairy Challenge. Many teams from The Ohio State University have placed first at the contest, including in 2021. He also served on the board of directors for the North American Intercollegiate Dairy Challenge for several years, including as chair, and was instrumental in forming the Dairy Challenge Vet program. He has assisted in hosting two national and three regional Dairy Challenge programs.

As one of the founding board members and perpetual chair, he has fostered the growth of student programs during the annual Tri-State Dairy Nutrition Conference, with students participating in the research presentations and a focused undergraduate learning program from several universities from the Midwest and beyond. For many years, he has been an advisor for the Buckeye Dairy Club, which is a very active student organization that received three awards at the 2022 College Banquet. Through his dairy nutrition research program, he has mentored many MS and PhD students, including former students in prominent positions in the dairy industry and on faculty at other universities, and has mentored many students in undergraduate research, resulting in several of them having their first scientific publication. He also has provided leadership to the Veterinary Early Commitment Program in the department, which is a program that fosters students to enter veterinary school with a focus to practice in food animal medicine, for many
year. At the university and college levels, he has been recognized for his outstanding service to students and student development. In 2018 he was appointed associate chair of the department, with a focus on academic programs.

**Patrick Gorden**

**2022 West Agro Inc. Award**

Patrick Gorden, DVM, PhD, DABVP, DACVCP, is a 1993 graduate of Iowa State University’s College of Veterinary Medicine. Following graduation, Gorden joined the Platteville Veterinary Clinic, a predominantly dairy practice in Wisconsin. In 2000 he joined Dairy Veterinary Services, a full-service dairy practice in Chandler, Arizona. As a practitioner, he provided dairy health and production services to farms that ranged in size up to 9,000 cows. Although he enjoys helping producers maintain the health of their herds, his real passion is in the development of quality milk programs and milking equipment evaluation.

In 2007 Gorden and his family relocated back to Ames, Iowa, when he joined the faculty at Iowa State University’s College of Veterinary Medicine. He is currently an associate professor specializing in dairy production medicine and clinical pharmacology in the Department of Veterinary Diagnostic and Production Animal Medicine. His duties include providing clinical service to dairy clients, teaching dairy production medicine to veterinary students, carrying out applied research projects in dairy cattle and dairy goats, and participating in departmental administration. In academia, his passion for milk quality and milking equipment performance has continued but morphed to include prevention of drug residues in milk and dairy beef, the biology of drug metabolism in the health-compromised cow, and antimicrobial resistance in dairy animals and their products. A supporter of lifelong learning, Gorden earned board certification from the American Board of Veterinary Practitioners (Dairy) in 2004, received his PhD in Veterinary Microbiology in 2017, and earned board certification with the American College of Veterinary Clinical Pharmacology in 2018.

Gorden has been an active member of the American Association of Bovine Practitioners (AABP) since veterinary school. He has been a member on multiple committees and is currently the organization’s president. He has been the AVMA/AABP liaison to the National Conference of Interstate Milk Shipments (NCIMS) since 2012, where he serves on the Appendix N Subcommittee, which develops drug-testing programs for milk. He also serves on NCIMS’s Executive Board as the university liaison. Gorden is an active member in the National Mastitis Council and serves on the Expert Council for Global Vet Link.

Gorden and his wife of 31 years, Kelly, are the proud parents of three college-aged children.

**Lance Baumgard**

**2022 Zinpro Award for Excellence in Dairy Science**

Lance Baumgard is Distinguished Professor and the Normal Jacobson Professor of Nutritional Physiology in the Department of Animal Science at Iowa State University. Baumgard is recognized for his research efforts relating to milk fat synthesis, metabolism, energetics of the transition and heat-stressed cow, and immunometabolism. He teaches Principles of Nutrition for undergraduates and Bioenergetics and Advanced Ruminant Nutrition at the graduate level. Baumgard and his colleagues have recently focused their research efforts on the energetic and mineral requirement of an activated immune system. In particular, he and his group are describing how immune activation alters nutrient trafficking and ultimately reduces farm animal productivity in multiple on-farm scenarios. Baumgard has been the principal investigator or co-principal investigator on over $12.5 million in research funding. Baumgard and his group have published more than 200 peer-reviewed publications, 120 conference proceedings, and more than 300 abstracts.

Baumgard is a native of southwest Minnesota who grew up on a swine and row-crop farm. He has BS and MS degrees from the University of Minnesota and a PhD from Cornell University. He joined the University of Arizona faculty as an assistant professor in the fall of 2001 and joined Iowa State University in 2009. Baumgard, along with his wife, Aileen Keating, and children, live in Ames.
Laura L. Hernandez  
2022 Zoetis Physiology Award

Laura L. Hernandez is a professor in the Department of Animal and Dairy Sciences at the University of Wisconsin–Madison. She received her PhD in 2008 from the University of Arizona and completed her postdoctoral fellowship at the University of Cincinnati in 2011. She has been focusing her research on lactation physiology and calcium homeostasis surrounding the periparturient period. Her groundbreaking work in the field has resulted in much research that is critical to the dairy industry and the American Dairy Science Association. She uses basic research skills and intense physiological research projects to understand the mechanisms underlying the biology of the dairy cow to develop better management practices for periparturient dairy cows. She uses a physiological approach to delineate the mechanisms that regulate calcium metabolism, combining molecular work in rodents as a model to understand and apply the knowledge to the dairy cow. Her work in the area of calcium metabolism during the periparturient period has uncovered the novel biology surrounding the contribution of serotonin and how that is critical for understanding how the early-lactation cow functions and the best ways to support the dairy cow during this timeframe to ensure maximum animal health and welfare. Her expertise as a whole-animal physiologist combined with molecular biology have allowed her to approach the study of the periparturient dairy cow from a novel point of view. She also studies the effects of serotonin, through the use of selective serotonin reuptake inhibitors by the dam during the peripartal period, on maternal and fetal health during this time frame.

Hernandez is regularly invited to give presentations on her research in the dairy science and biomedical research fields. She is often a speaker on a variety of programs, which speaks to the breadth of her physiological research and the effects of her research on various communities (dairy nutrition programs, breastfeeding medicine programs, extension programs, international physiological programs). She also often speaks in the community for programs that deliver scientific content to the public (Speed Science-ing, Stand Up Science). Her physiological research program has led to novel discoveries that are critical for dairy cows. These continued invitations speak to her expertise in physiology and the effects of her research program. Hernandez is very active in the American Dairy Science Association, currently a section editor in the physiology section for the *Journal of Dairy Science*, and on the board of the American Dairy Science Association as a liaison for the production division. She has served on the Lactation Biology Committee and the Graduate Student Committee, which judges the graduate student abstracts at the annual meeting.

**Ursula Abou-Rjeileh**  
2022 National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production, MS Division

The recipient of the National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production: MS Division first-place award is Ursula Abou-Rjeileh. She is a second-year graduate student at Michigan State University in Dr. Contreas’s laboratory. Her research focuses on understanding oleic acid’s effect on adipose tissue metabolism in early postpartum dairy cows. She hopes that her research will help develop more refined nutritional interventions to improve overall postpartum cow health and production.

Hernandez, left, Todd Meinert with Zoetis, right (donor representative).

The second-place winner is Pari Baker of The Ohio State University. The third-place winner is Clare Bertens of the University of Saskatchewan.

Abou-Rjeileh, left, Jerry Bowman, ADSA executive director, right (donor representative).
Thainá Minela
2022 National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production, PhD Division

The recipient of the National Milk Producers Federation Graduate Student Paper Presentation Contest in Dairy Production: PhD Division first-place award is Thainá Minela. Originally from Santa Catarina, Brazil, Minela graduated in Veterinary Medicine at the Federal University of Santa Maria. In 2020, she received a master’s degree in animal science at Michigan State University, where she now pursues a PhD degree. Minela works under the supervision of J. Richard Pursley. Her research focuses on understanding underlying mechanisms of subfertility in dairy cattle.

Yufeng (Evelyn) Lin
2022 National Dairy Council Graduate Student Paper Presentation Contest in Dairy Foods Research

The recipient of the National Dairy Council Graduate Student Paper Presentation Contest in Dairy Foods Research first-place award is Yufeng (Evelyn) Lin. Lin is a food science MS student at North Carolina State University, studying physicochemical properties of dairy proteins. Lin is currently studying linear and nonlinear interfacial rheology and in vitro digestion.

The second-place winner is Nolwenn Paugam of Université Laval. The third-place winner is Bailey Gong of Cornell University.

Brianda Daniela Gonzalez Orozco
2022 Daisy Brand Graduate Student Poster Presentation Contest in Dairy Foods Research

The recipient of the Daisy Brand Graduate Student Poster Presentation Contest in Dairy Foods Research first-place award is Brianda Daniela Gonzalez Orozco.

Gonzalez Orozco, left, Brandon Nelson with Daisy Brand, right (donor representative).

Orozco is a PhD student in the department of Food Science and Technology at The Ohio State University with a master’s in Food Science and Technology and a bachelor’s degree in Food Chemical Engineering from the Autonomous University of Querétaro, Mexico.

The second-place winner is Erica Crown of North Carolina State University. The third-place winner is Nathan Pougher of Utah State University.

Alisson Da Mota Santos
2022 Purina Animal Nutrition Graduate Student Poster Contest in Dairy Production, MS Division

The recipient of the Purina Animal Nutrition Graduate Student Poster Contest in Dairy Production: MS Division first-place award is Alisson Da Mota Santos. Santos was born in the midwest region of Brazil, where he lived for most of his life. He graduated with a bachelor’s degree in veterinary medicine from the Federal University of Mato Grosso, also in Brazil. Santos has very recently graduated with his master’s degree under the guidance of Richard Pursley.
ley at Michigan State University. While pursuing his master’s degree, Santos (with Pursley) investigated a model to determine time of conceptus attachment in lactating dairy cows. He intends to further his current line of research while advancing his education in the pursuit of a PhD under Pursley’s supervision. Santos also hopes to work toward expanding knowledge and education on reproductive physiology and management of dairy cattle.

The second-place winner is Kylee Elmore of the University of Idaho. The third-place winner is Kristen Gallagher of Michigan State University.

Jackson Seminara  
2022 Purina Animal Nutrition Graduate Student Poster Contest in Dairy Production, PhD Division

The recipient of the Purina Animal Nutrition Graduate Student Poster Contest PhD Division first-place award is Jackson Seminara. Seminara is from New York City, attended Cornell University to obtain his undergraduate degree, and is currently enrolled in the combined degree DVM/PhD program at Cornell University.

Seminara, left, Veridiana Daley with Purina, right.

The second-place winner is Alberto José Lopez Cabus of the University of Guelph. The third-place winner is Mark Ellett Jr. of Virginia Tech.

2022 ADSA GSD Three-Minute Thesis Winners

The first-place winner of the Graduate Student Division Three-Minute Thesis contest is Bhaswati Chowdhury of South Dakota State University. The second-place winner of the Graduate Student Division Three-Minute Thesis contest is Kritika Gaba of South Dakota State University. The third-place winner of the Graduate Student Division Three-Minute Thesis contest is Patrick Tai of the Riddet Institute.

The people’s choice award of the Graduate Student Division Three-Minute Thesis contest is Usman Arshad of the University of Florida.

Sara Hettinger  
2022 ADSA-SAD Undergraduate Oral Contest in Dairy Foods

The recipient of the ADSA-SAD Undergraduate Oral Contest in Dairy Foods first-place award is Sara Hettinger. Hettinger is a third-year biology major at the University of Florida, pursuing minors in Pathogenesis and Extension Education. She has been a member of the University of Florida Dairy Science Club since August 2019 and has served as the President of the club for the past year. Hettinger is currently employed at the UF Large Animal Hospital as a veterinary technician. She plans upon graduation to attend veterinary school in preparation for a career in Large Animal Medicine.

The second-place winner is Renee Hutton of the University of Georgia. The third-place winner is Cessna Langford, University of Kentucky.

Valerie Rakoczy  
2022 ADSA-SAD Undergraduate Student Oral Contest in Dairy Production

The recipient of the ADSA-SAD Undergraduate Student Oral Contest in Dairy Production first-place award is Valerie Rakoczy. Originally from Trumbull, Connecticut, Rakoczy is a junior at the University of Wisconsin–River Falls studying neuroscience. During her time in school, Rakoczy participates in the pre-veterinary club, Beef Management Team, Academic Quadrathlon team, and the Animal Welfare Laboratory. Academically, she holds a determined interest in cognitive neuroscience as well as pain management research using large animal models. Outside of school, Rakoczy enjoys all aspects of nature and is an avid stargazer. As for work, Rakoczy is an emergency medical technician and will be applying to veterinary school this cycle with goals of becoming a veterinary neurologist.

The second-place winner is Gregory Norris of The Pennsylvania State University. The third-place winner is William Strickland, University of Georgia.

Savannah Jones  
2022 ADSA-SAD Undergraduate Student Paper: Original Research/Independent Study

The recipient of the ADSA-SAD Undergraduate Student Paper: Original Research/Independent Study...
first-place award is Savannah Jones. Jones is a sophomore in the Department of Agricultural and Resource Economics at the University of Tennessee. She is pursuing minors in both Entrepreneurship and International Agriculture. In the future, Jones plans to pursue graduate school and study policy.

The second-place winner is Sydney Puda of Michigan State University. The third-place winner is Anna Cappellina of Virginia Tech.

Jaquelin Spring
2022 ADSA-SAD Undergraduate Poster Contest in Original Research/Independent Study

The recipient of the 2022 ADSA-SAD Undergraduate Poster Contest in Original Research/Independent Study first-place award is Jaquelin Spring of The Pennsylvania State University.

The second-place winner is Paige Gibb of Michigan State University. The third-place winner is Samantha McBeth, also of Michigan State University.

Gregory Norris
2022 ADSA-SAD Outstanding Student

The ADSA-SAD Outstanding Student for 2022 is Gregory Norris of The Pennsylvania State University.

Jillian Bohlen
2022 ADSA-SAD Outstanding Advisor

The ADSA-SAD Outstanding Advisor for 2022 is Jillian Bohlen of the University of Georgia.

Jessica Schmitt
2022 Genevieve Christen Undergraduate Student Award

Jessica Schmitt is the recipient of the 2022 Genevieve Christen Distinguished Undergraduate Student Award. Jessica Schmitt will be graduating from Iowa State University, where she is triple majoring in dairy science, international agriculture, and agriculture and life sciences education with an option in communications. Schmitt grew up on her family’s dairy farm near Fort Atkinson, Iowa, which filled her with a strong commitment to ensure the public understands and appreciates the product dairy farmers produce. Following graduation, Schmitt will begin working full time as the integrated communications coordinator for Dairy West, the checkoff organization of Idaho and Utah. During that time, she will also be pursuing her master’s in communication through Purdue University. Currently, Schmitt serves as the ADSA-SAD president.

Hasitha Priyashantha
2022 ADSA Foundation Graduate Student Literature Review Award: Dairy Foods PhD Division

Hasitha Priyashantha holds a PhD in food science from the Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden. His research interests pertain to wider aspects concerning raw milk characteristics and dairy and food technology. In his doctoral thesis, he investigated how on-farm factors and season contribute to the variation in raw milk and whether this variation influences the ripening time of a Swedish long-ripening cheese using a full-scale cheese making trial. Priyashantha’s research has, thus, covered the whole value chain of long-ripened cheese, from dairy farming to quality of bulk and dairy-silo milk and finally the ripening of the resulting cheese. All studies in his thesis were published (five research articles) in peer-reviewed and highly ranked journals within the fields of food science and dairy science at the time of his defense.

The resume of his thesis was partly based on his published review article in the *Journal of Dairy Science* as a Graduate Student Literature Review, which was awarded the ADSA Foundation Graduate Student Literature Review Award: Dairy Foods PhD Division in 2022. He followed the Erasmus Mundus double master’s degree programs: MS in animal science at SLU, Sweden, and MS in food science at the University of Copenhagen, Denmark. He obtained a bachelor’s degree (first-class division) in agricultural technology and management (focused on animal and dairy science) from the University of Peradeniya, Sri Lanka, and completed the Erasmus exchange period by undertaking his undergraduate research thesis project and internship in dairy science at the University of Santiago de Compostela, Spain.
Compostela, Spain. His BS and MS theses were within the scope of dairy science, and those were published in high-quality, peer-reviewed international journals. Along with his research, Priyashantha is passionate about science communications. After his doctorate, Priyashantha shared his time as a researcher at SLU focusing on novel food characterization techniques and as a lecturer at Folkuniversitet Uppsala in the food and pharma technology program.

**Meghan Connelly**

**2022 ADSA Foundation Graduate Student Literature Review Award: Production PhD Division**

Meghan Connelly was born in Rochester, Minnesota, where she grew up on her family’s dairy farm. Involved in agriculture at a young age, she fell in love with the dairy cow and never strayed. Her passion for agriculture and the dairy industry fueled her to continue her education and further her understanding of the dairy cow.

This continuation led her to the University of Wisconsin–River Falls, where Connelly double majored in dairy science and agricultural business. Upon completion of her undergraduate degrees, Connelly began her graduate work in Laura Hernandez’s laboratory at the University of Wisconsin–Madison. Her doctoral program in the Hernandez laboratory focused on delineating the serotonin-calcium axis in the dairy cow through various calcium and serotonin perturbation strategies. Moreover, her doctoral work also sought to explore the timing of calcium homeostatic mechanisms in relation to calcium loss.

Connelly’s first studies examined how perturbing the serotonin axis by administering the precursor to serotonin, 5-hydroxy-L-tryptophan (5-HTP), would alter circulating and mammary serotonin and calcium metabolism. Opposingly, her subsequent studies perturbated calcium via either chelation or infusion to examine how circulating and mammary serotonin and calcium metabolism were impacted. This resulted in the writing of her review “Serotonin and calcium metabolism: A story unfolding.” In this review, Connelly sought to demonstrate the collective integration of calcium physiology across the dairy cow’s life span—gestation through lactation. More explicitly, the review discussed the current understanding of calcium metabolism, mammary calcium transport, serotonin metabolism, and the serotonin-calcium axis, while also examining the challenges and limitations of current research as we continue to explore and examine this axis.

Connelly has been an active member and volunteer in numerous collegiate and industry organizations that focus on outreach, education, and inclusivity during her undergraduate and graduate work. Connelly has been active in agricultural clubs, collegiate dairy judging, dairy judging coaching, dairy challenge, teaching and mentoring, graduate student associations, and the University of Wisconsin–Madison Equity and Diversity Committee. Connelly recently was recognized as a Midwest Branch Young Dairy Scholar by the American Dairy Science Association. Upon completing her doctorate in August of 2021, Connelly started at Vita Plus as a dairy nutritionist and technical services specialist.

**Erin Shangraw**

**2022 ADSA Foundation Graduate Student Literature Review Award: Production MS Division**

Erin Shangraw is currently a PhD student at the University of Missouri–Columbia. Born and raised in New Hampshire, she earned her bachelor’s at the University of New Hampshire. As an undergraduate, she combined her love of dairy cows with research, investigating the effects of direct-fed microbials on colostrum quality and calf immunity for her honors thesis in Peter Erickson’s laboratory. After graduating, Shangraw pursued her master’s in animal sciences in Thomas B. McFadden’s laboratory at MU. Her interest in lactation physiology expanded to focus on the effects of environmental stressors and inflammatory mediators, particularly lipopolysaccharides, on milk production. While reviewing the literature, she was intrigued to find that although clinical mastitis in one mammary gland reduces milk production in all glands, no study could adequately explain this systemic response. This led to her research project using mammary tissue transcriptomics to determine which systemic factors and mediators of inflammation could explain the responses of noninflamed glands to a localized mastitis challenge. She is continuing to study these factors, in addition to other aspects of lactation physiology, at MU.

As a graduate research assistant, Shangraw also enjoys teaching undergraduates about dairy produc-
tion and research. Since completing the UNH CREAM dairy management course, she believes that hands-on, experiential learning is the best teaching method to educate and engage students interested in dairy and science. Whether she is describing standard operating procedures at the farm, demonstrating benchtop techniques in the lab, or helping to develop a calf management course, she is thrilled to see students excel when given the tools and skills that will help them succeed in future careers.

**Tom O’Callaghan**  
2022 ADSA Foundation Scholar Award  
in Dairy Foods

Tom O’Callaghan was born and raised in Mitchelstown, Co. Cork, in the south of Ireland. O’Callaghan obtained his BS in food science from University College Cork (UCC) in 2014 and began his PhD at the Teagasc Moorepark Food Research Centre in 2015 in collaboration with UCC. The title of his PhD thesis was “Effect of Cow Feeding System on the Quality and Constituents of Raw Milk, Dairy Products and the Rumen” and set out to examine the effects of pasture-based feeding systems, widely practiced in Ireland, versus indoor total mixed ration systems on the composition and quality of milk and dairy products. During his PhD, O’Callaghan received an overseas training award to travel to the University of Alberta, in Canada, to work with the Wishart Group and the Metabolomics Innovation Center.

O’Callaghan’s independent career began in 2017, when he took up the position of research officer in dairy chemistry with Teagasc, the Irish Agriculture and Food Development Authority, and managed a research group with a focus on understanding the implications of primary production practices on the composition, quality, and functionality of milk and dairy products. In May 2020, O’Callaghan took the position of lecturer in food science and technology in UCC and is laboratory head and principal investigator of the Food Production, Chemistry and Technology (FOODIE) Research Group. Research to date has been focused on examining the effects of on-farm practices on the rumen, as well as the quality and characteristics of dairy across the supply chain, with particular focus on grass-fed dairy, techno-functional properties of milk, the rumen and milk metabolome, and tools for prediction and authentication. O’Callaghan has presented elements of his work at both national and international conferences. O’Callaghan teaches and coordinates a number of modules delivered to both undergraduate and postgraduate students around food science, food production, dairy chemistry, and processing technologies, and he is academic director of a short course on concentration and drying delivered through the Food Industry Training Unit at UCC.

O’Callaghan continues to work closely with dairy industry stakeholders, manufacturers, and processors, as well as collaborate with several academics and institutions around the world. O’Callaghan is a principal investigator with the Enterprise Ireland–funded research center—The Dairy Processing Technology Center—and is an academic collaborator with VistaMilk, a Science Foundation Ireland research center. O’Callaghan is an associate editor for the *International Journal of Dairy Technology* and actively serves as a reviewer for several international journals, including the *Journal of Dairy Science*. In his career to date, O’Callaghan has received in excess of €2.2 million in research funding; has published ~48 research articles, reviews, and book chapters (h-index 16); and currently supervises four PhD students and three MS students.

**Kathryn (Katy) Proudfoot**  
2022 ADSA Foundation Scholar Award  
in Dairy Production

Kathryn (Katy) Proudfoot is an associate professor and director of the Sir James Dunn Animal Welfare Centre at the Atlantic Veterinary College, University
of Prince Edward Island, Canada. She earned her PhD at the University of British Columbia’s Animal Welfare Program in applied animal biology and was an assistant professor and extension specialist at The Ohio State University’s College of Veterinary Medicine before joining the Atlantic Veterinary College. Proudfoot’s professional goal is to improve the lives of animals through teaching, research, and outreach. Her research program focuses on understanding the relationship between animal welfare, management, and health in dairy cattle and other species. Specifically, her research has aimed to improve maternity housing for dairy cattle by understanding natural maternal behaviors, determining the effects of stressors on animal behavior and health, and identifying welfare and ethical concerns with the management of surplus dairy calves. Since 2008 she has published over 50 peer-reviewed journal articles and 70 scientific abstracts and has given over 85 invited presentations to the dairy community.

Through teaching, Proudfoot has contributed to the training of the next generation of veterinarians, animal scientists, and industry leaders in the areas of animal behavior and welfare. Proudfoot currently teaches animal behavior and welfare to veterinary students at the Atlantic Veterinary College and hosts several outreach activities for practicing veterinarians and students through the Sir James Dunn Animal Welfare Centre, including an annual webinar series and Animal Welfare in Practice symposium. Proudfoot serves as a resource to her academic and professional community on the topic of animal welfare through her involvement in several organizations. She has been especially involved with the American Dairy Science Association as the first president of their Graduate Student Division, a member and chair of program committees related to transition dairy cows and animal welfare, and most recently a section editor for the Journal of Dairy Science. She has also served as an advisor to several other organizations, including the American Veterinary Medical Association’s Animal Welfare Committee and the CAST Animal Working Group, and as a judge for the 4-H Dairy Quiz Bowl. A native Californian, Proudfoot currently lives in Prince Edward Island with her husband and young daughter.

Bo Han
2022 JDS Highly Cited Award
China Agricultural University

José Eduardo P. Santos
2022 JDS Highly Cited Award
University of Florida

Ewa Wasilewska
2022 JDS Highly Cited Award
Polish Academy of Sciences

Rafael Jiménez-Flores
2022 ADSA Award of Honor

Rafael Jiménez-Flores is a renowned researcher and educator, well known for his contributions to dairy science. He currently serves as the J. T. “Stubby” Parker Endowed Chair in Dairy Foods in the Department of Food Science and Technology at The Ohio State University. A career-long member of the organization, Rafael Jiménez-Flores’s outstanding and consistent contributions to the American Dairy Science Association are worthy of recognition.

Perhaps most noteworthy is Jiménez-Flores’s tireless work in ADSA governance. He has been active in many roles within ADSA. Jiménez-Flores was director of the ADSA Board of Directors for two 3-year terms. He was elected vice president of ADSA in 2018. In 2019 he moved to the role of president, where he was integral in the selection and contracting of a new executive director for ADSA. The COVID-19 pandemic hit while he was serving as president of ADSA, and decisions had
to be made quickly, resulting in a virtual annual meeting, which was successful despite the pandemic-related challenges.

Jiménez-Flores’s service covers a wide range of activities. He served as the chair of the Committee for Milk Protein and Enzymes for 15 years. In this role, he coordinated and coauthored the eighth edition of Milk Proteins Nomenclature. He has participated in numerous ADSA Annual Meeting activities. He was organizer of seven symposia at the ADSA Annual Meeting “Milk Proteins and Enzymes” and organizer of one symposium he coordinated with the Lactation Biology Committee. He also served as program chair for dairy foods at the ADSA Annual Meeting. He was a member of the Lactation Biology Committee for three years, during which time he served as the chair and past chair. Jiménez-Flores has previously been honored with two ADSA awards: the International Dairy Foods Association (IDFA) Research Award in Dairy Foods Science (2009) and the Milk Industry Foundation/Kraft Outstanding Teaching Award (2003).

Jiménez-Flores has contributed outstanding service to the Journal of Dairy Science. He has been a member of the JDS editorial board for more than six years. In addition, he served two 3-year terms as the section editor for the Dairy Foods section as well as one term as senior editor for Dairy Foods. He also served two terms on the journal management committee. Under his leadership as president of ADSA, the Journal of Dairy Science published a record numbers of research articles, surpassing a journal impact factor of 4.0. The same year, JDS launched a new fully open access journal, JDS Communications. Jiménez-Flores considers this accomplishment most significant, as it expands ADSA’s ability to disseminate science and knowledge in the field.

Jiménez-Flores’s research is well recognized by the industry and researchers alike. He has received funding from federal and state organizations, including the Dairy Research Institute in California, Agricultural Research Initiative, Dairy Management Inc., and American Dairy Association Mideast of Ohio, with total funding exceeding $10 million throughout his career. He has received funding from private companies, including Hilmar Cheese, El Mexicano, Purina (Nestle), Superior Dairy, Fairlife (Coca-Cola), Mead Johnson Nutrition, and Dairy Specialties.

David Mark Barbano grew up in Cazenovia, New York, and received his BS (biology and food science) and MS and PhD degrees (food science) at Cornell University. Barbano is professor of food science and director of the Northeast Dairy Foods Research Center and has made outstanding contributions to the advancement of food science and the dairy industry in the areas of milk chemistry; analytical methods for milk and dairy products; dairy herd management milk testing for de novo, mixed, and preformed fatty acids; membrane filtration of milk and whey; and dairy product manufacturing technology over four decades in his research, extension, and teaching programs. Barbano is a past president of the American Dairy Science Association, past chair of the American Dairy Science Association Foundation, and fellow of AOAC International and the American Dairy Science Association.

He teaches an undergraduate course in Chemistry of Dairy Foods. His research includes topics in chemical and instrumental methods of analysis for milk and dairy foods; development and evaluation of pilot scale membrane filtration methods; development of improved cheese making methods to provide better control of flavor and functionality of natural cheeses; and development of milk testing methods for use in large dairy farm management with the most recent implementation of rapid measurement of de novo, mixed origin, and preformed milk fatty acids. His extension activities
include training workshops and conferences on chemical analysis of milk and milk products and new methods of milk processing and cheese making.

Barbano’s accomplishments as a laboratory scientist are unsurpassed, and he applies the same level of rigor and careful attention to detail when he is problem solving or teaching in the field. He approaches every question or problem with the same attention to detail and careful consideration of possibilities and alternative explanations that he would in the laboratory. Moreover, he is never content to take a client’s description of a problem at face value, without first convincing himself that it is indeed the primary problem and not a reflection, correlation, or symptom of a different, underlying issue. Despite his popularity as a student mentor and ability to engage in more funded research, Barbano has maintained an unwavering commitment to working with dairy foods processors, large dairy farms, and related firms and organizations. He is widely recognized as the leading authority in a number of specific areas but is also nimble enough to identify problems and possible solutions outside of areas such as instrumentation, analytical chemistry, membrane separation, and so on.

Barbano’s work has touched all aspects of milk marketing in the United States on a daily basis. The USDA Market Administration has always looked at Barbano as an extension of their office when it came to educational efforts. Most researchers have a very limited understanding of milk marketing, whereas Barbano has consistently involved himself with the Federal Milk Marketing Orders and has been an asset for the US dairy industry.

**JDS Club 100: Class of 2022**

Individuals who have authored or coauthored 100 or more papers in the journal were inducted into JDS Club 100 at the 2022 ADSA Awards Program. The JDS Club 100 class of 2022 included Ignacy Misztal and Wolfgang Heuwieser.