

*We facilitate the well-being of animals using sound science and ethics to investigate and promote the best animal care and management practices.*

## Purdue Graduate Students Shine at the AVMA Animal Welfare Assessment Contest

Purdue's Animal Welfare Team placed 2nd overall for the graduate division at the 2023 AVMA Annual Animal Welfare Assessment Contest.

Individual Purdue graduate students also won awards:

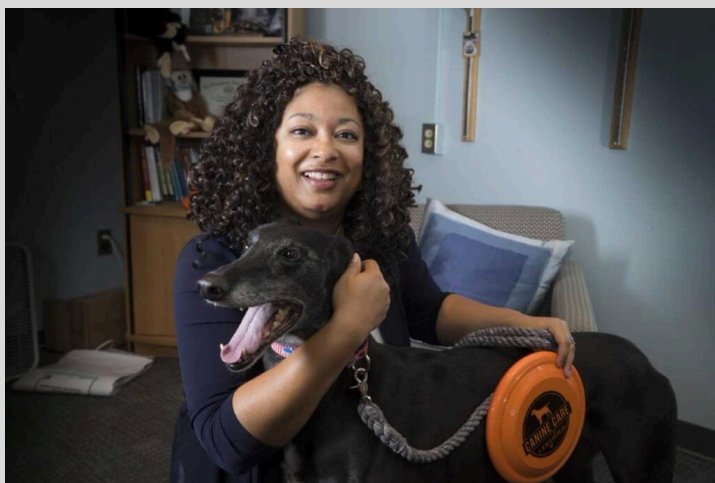
- Maddie Pinkerton placed 1st overall
- Hayley Sutherland, graduate student from Dr. Marisa Erasmus's lab placed 3rd overall
- Elizabeth Schafer placed 4th overall

Congratulations to all Purdue students who participated!



**Pictured left to right: Maddie Pinkerton, Elizabeth Schafer, Gideon Ajibola, Junior Cheng, Hayley Sutherland**

## CAWS Director in Cooperative Agreement with USDA to Study the Impact of Transportation on Puppy Welfare



The Croney Research Group received USDA funding to study the effects of transportation on puppy welfare. Science-based information is lacking for guidance or regulations to protect the welfare of dogs during transport. The research will be conducted with dogs from commercial breeding kennels and is expected to support other stakeholders who transport dogs, including shelter/rescues, biomedical research facilities, and pet families.

# Upcoming CAWS Events



## **Thursday, April 25, 2024, 4 PM G167 Lynn Hall Dr. Leanne Nieforth The Human-Animal Bond and Implications for Animal Welfare**

Join us for a seminar with Dr. Nieforth, who will discuss her research exploring human-animal interactions from a multi-modal biopsychosocial approach. Her work focuses on the interactions of humans and animals in the context of animal-assisted interventions.

## **June 14 - 15, 2024 Canine Welfare Science Forum**

Join us for this year's Canine Welfare Science Forum, featuring topics of relevance to dog breeders, shelters, kennel managers and caretakers, scientists, regulators, students, pet industry personnel, and interested others. It will be two days packed with networking, learning, and engagement!

[Registration link](#)

**Venue:** Courtyard by Marriott in Lafayette, Indiana.



# Recent CAWS Seminars



## **Dr. Jay Johnson: Improving Swine Heat Stress Resilience and Welfare in a Changing Climate,**

We thank Dr. Johnson for his well-received talk in November on his research related to heat stress resilience in swine. Dr. Johnson's research program encompasses stress physiology, nutritional physiology, and applied ethology to develop and/or improve upon livestock husbandry practices. By improving heat stress resilience in swine, we can reduce the negative effects of pre- and postnatal heat stress to improve health, performance, and welfare metrics.

# Navigating the Narratives: Grant Update

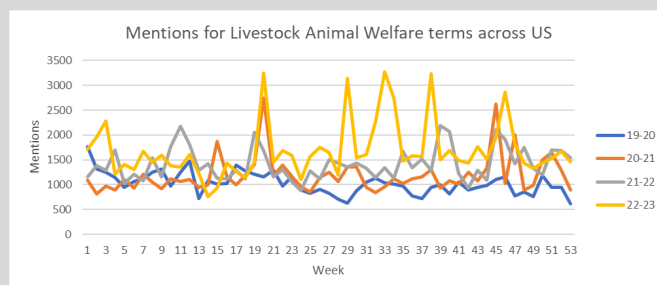
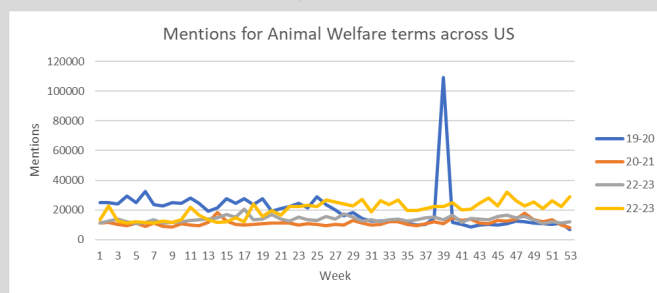
Several CAWS members collaborated on an AgSeed grant, Purdue University College of Agriculture's internal grants system focused on advancing Indiana's leadership in plant and animal agriculture and rural development. Projects from the grant, "Navigating the narratives: developing communications to address science-policy and stakeholder engagement gaps in agricultural animal welfare?" are underway. We are excited to share preliminary findings on one aspect of the project from Dr. Nicole Olynk Widmar.



The use of online and social media data to understand how people perceive products, concepts, topics, and/or social phenomena has grown in popularity. However, using online and social media data to understand topics related to agriculture has been underappreciated. In an interview ahead of the 2019 Dawn or Doom conference, Dr. Nicole Olynk Widmar stated, "I worry that agriculture is in a bubble...We think we know what the public thinks about X, but 1.7 million posts later and that's not the prevailing view." Now she is working with Dr. Valerie Kilders, Michael Smith, Zachary Neuhofer, and Lauren Bales to understand public mentions of animal welfare. Graduate students Sachina Kida, Anam Ali, Ben Ellman, and Luke Grieser also participated in the data collection effort.

Using a web scraping and natural language processing platform, this team studies the volume of online posts from social medias along with news sources, blogs, and forums. The process first collects all posts pertaining to animal welfare, and then the data is refined to only mentions of welfare pertaining to livestock. The data were limited to posts originating in the United States, from October 2019 to September 2023. This time period includes significant developments in the discussion surrounding animal welfare including the implementation of Proposition 12 in California.

Preliminary data analysis reveals the total mentions of animal welfare terms and the subset of terms specific to livestock animals (see images). Further analysis will explore consumer sentiment regionally, revealing top terms, reactions to major events, and other data-driven insights.



# Awards and Accolades



Dr. Luiz Brito was selected for the American Society of Animal Science **ASAS 2024 Early Career Achievement Award**, and Dr. Kolapo Ajuwon was selected to receive the **ASAS 2024 Animal Growth and Development Award**. Congratulations to both!

Dr. Darrin Karcher was presented with the **USPOULTRY Charles Beard Research Excellence Award** at the 2024 International Production & Processing Expo in Atlanta. This award recognizes outstanding research projects which have made a significant positive impact on the poultry industry.

## USDA grants awarded to CAWS faculty

Dr. Marisa Erasmus, associate professor of animal sciences, received a four-year, \$793,000 grant to develop protections for laying hens from the northern fowl mite.

Dr. Heng-wei Cheng and Dr. Marisa Erasmus also received a \$650,000 grant from the USDA National Institute of Food and Agriculture to study the use of thermal perches to reduce cold stress in laying hens.

Dr. Gregory Fraley, has received a four-year, \$647,000 grant to understand the visual system of ducks, with the ultimate goal of improving poultry welfare.

## Human-Animal Bond Research Funded

Dr. Niwako Ogata received a grant from the Human-Animal Bond Research Institute (HABRI) and Pet Partners to investigate the impact that interacting with a dog has on human brain activity.



## And...

Dr. Kari Ekenstedt received a 2023 Zoetis Award for Veterinary Research Excellence.

Dr. Candace Croney was appointed to the North American Meat Institute (NAMI) Protein PACT Academic Advisory Council. Dr. Croney was also invited by the National Academy of Sciences to serve on the planning committee for their workshop, *Effective Communications with the General Public about Scientific Research that Requires the Care and Use of Animals*, held in December 2023.

Dr. Yaohua (Betty) Feng was reappointed to serve on the USDA National Advisory Committee on Microbiological Criteria for Foods (NACMCF).

# Supporting our mission

The Center for Animal Welfare Science (CAWS) was formally established in 2014.

Supported jointly by the Colleges of Agriculture and Veterinary Medicine, and led by Dr. Candace Croney, CAWS aims to address contentious social issues in animal welfare, inform policy development, and explore the broad effects of the human-animal bond, our obligations to animals, and their evolving roles in society.

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SCIENCE

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Want to contribute  
to the next issue?

Get in touch!

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## New Faces: Faculty

**Dr. Leanne Nieforth** has joined Purdue as an Assistant Professor of Human-Animal Interaction at the Center for the Human-Animal Bond. Her research has included studying the impacts of service dogs for veterans with PTSD and children with ADHD.



**Dr. Jessica Pempek** recently joined the USDA-ARS Livestock Behavior Research Unit as a Research Animal Scientist. She earned her MSc and PhD degrees at Ohio State, where she also served as an Assistant Professor and Animal Welfare Specialist. Her research is focused on the welfare of dairy and beef animals, particularly in early life.

CAWS welcomes **Dr. Heather Neave**, Assistant Professor of Applied Ethology in Purdue's Department of Animal Sciences. Her research promotes positive welfare in commercial farming and understanding the emotional states, cognitive abilities and personalities of dairy animals.



## New Faces: Graduate Students



Welcome new PhD student, Xiangwang "Wendy" Gong, to the lab of Dr. Heng-wei Cheng!

Graduate student Daphne Licuan has joined Dr. Allan Schinkel's lab to study the effects of patented cooling pads on measures of level of heat stress and fertility for boars. She already has several abstracts submitted to the Midwest Society of Animal Science.



# Celebrating Contributions

## Dr. Alan Beck



On Tuesday, September 9th, 2023 Purdue celebrated with **Dr. Alan Beck** as he retired. Dr Beck served as the the Dorothy N. McAllister Professor of Animal Ecology and director of the Center for the Human-Animal Bond in the School of Veterinary Medicine at Purdue University for over 30 years.

He published extensively on the human-animal bond, including dozens of scientific papers and his influential book, *Between Pets and People*. Dr. Beck made many important contributions to our understanding of how we live with other animals.

The Human Animal Bond Research Institute, in collaboration with Purdue, has announced the Dr. Alan Beck Human-Animal Bond Scholarship Endowment, which will award scholarships to students investigating the human-animal bond.

## Dr. Janice Kritchevsky

CAWS board member **Dr. Janice Kritchevsky** VMD, MS is retiring this summer after a 40-year career at Purdue University. Her interest in investigation of animal cruelty and neglect led her to a more general interest in animal welfare. For many years she led the PetSafe program at the veterinary school. PetSafe provides care for pets owned by families that are temporarily homeless, most often because of domestic violence.

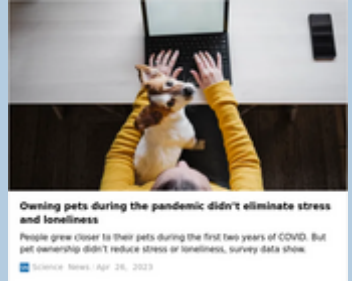


Dr. Kritchevsky was selected for a faculty fellowship in a second discipline, and during that time was able to focus on welfare science and the welfare of large animal species. Her particular interest was in the welfare implications of poor health and lameness in horses. She taught the basics of equine welfare to many veterinary students during her time at Purdue.

# CAWS in the Media

In **Science News**: Research by **Drs. Nikawo Ogata and Hsin-Yi Weng** found that although pet owners felt closer to their pets during the pandemic, they had higher stress levels and similar levels of loneliness as non-pet owners. Read more:

[www.sciencenews.org/article/pets-owners-bond-pandemic-stress](http://www.sciencenews.org/article/pets-owners-bond-pandemic-stress)



### Strong Attendance by Horse Owners Shows Enduring Popularity of Annual Equine Wellness Forum

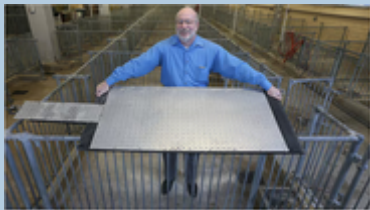
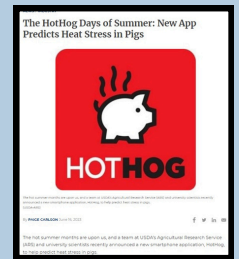
The 2024 Equine Wellness Forum at the Purdue University College of Veterinary Medicine drew 155 attendees, showcasing the demand for equine wellness education. Held at Lynn Hall, the event featured talks...

College of Veterinary Medicine | Feb 23

The 2024 Equine Wellness Forum, for horse owners and equine professionals, drew over 150 attendees to the Purdue Campus. Topics included sports professionals, care for senior horses, and communicable diseases in show horses. Speakers included CAWS member **Dr. Janice Kritchevsky**. Read more at: [vet.purdue.edu/news/strong-attendance-by-horse-owners-shows-enduring-popularity-of-annual-equine-wellness-forum.php](http://vet.purdue.edu/news/strong-attendance-by-horse-owners-shows-enduring-popularity-of-annual-equine-wellness-forum.php)

In **Pork Business**: The team at USDA's Agricultural Research Service (ARS), led by **Dr. Jay Johnson's** team has developed a new phone app that can help producers recognize heat stress in pigs.

[www.porkbusiness.com/news/industry/hothog-days-summer-new-app-predicts-heat-stress-pigs](http://www.porkbusiness.com/news/industry/hothog-days-summer-new-app-predicts-heat-stress-pigs)



### IHT Group to manufacture, sell hog-cooling technology developed at Purdue @PurdueRP

IHT Group, a division of Decisive Dividend Corp. (TSXV: DE) based in Winnipeg, Manitoba, is bringing patented cooling pad technology for hogs to the North American market in spring 2024.

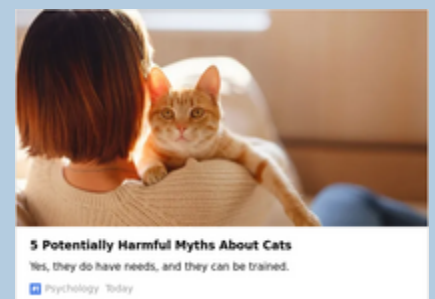
PurdueRP

**Drs. Allan Schinckel and Robert M. Stwalley III**, with the IHT Group, have designed cooling pads that can prevent overheating in hogs. Heat stress can reduce feeding, milk output, and sperm production. This technology will improve welfare and sow comfort. Learn more at:

[www.purdue.edu/newsroom/releases/2023/Q3/iht-group-to-manufacture-sell-hog-cooling-technology-developed-at-purdue.html](http://www.purdue.edu/newsroom/releases/2023/Q3/iht-group-to-manufacture-sell-hog-cooling-technology-developed-at-purdue.html)

**Dr. Candace Croney** spoke with **Psychology Today** about five of the most persistent - and potentially harmful - myths about cats, including about their social needs. Read more:

[www.psychologytoday.com/us/blog/animal-minds/202309/5-harmful-feline-myths-debunked](http://www.psychologytoday.com/us/blog/animal-minds/202309/5-harmful-feline-myths-debunked)



# Collaborative CAWS Publications

## highlighting CAWS members working together

**Croney, C.**, Udell, M., Delgado, M., **Ekenstedt, K.**, & Shoveller, A. K. (2023). CATastrophic Myths Part 1: Common misconceptions about the social behavior of domestic cats and implications for their health, welfare, and management. *The Veterinary Journal*, 106028.

Dong, Y., **Fraley, G. S.**, **Siegford, J. M.**, Zhu, F., & **Erasmus, M. A.** (2023). Comparing different environmental enrichments for improving the welfare and walking ability of male turkeys. *PLOS One*, 18(5), e0285347.

Fu, Y., Hu, J., Zhang, H., **Erasmus, M. A.**, Johnson, T. A., & **Cheng, H. W.** (2024). The impact of early-life cecal microbiota transplantation on social stress and injurious behaviors in egg-laying chickens. *Microorganisms*, 12(3), 471.

Fu, Y., Hu, J., **Erasmus, M. A.**, Zhang, H., Johnson, T. A., & **Cheng, H.** (2023). Cecal microbiota transplantation: unique influence of cecal microbiota from divergently selected inbred donor lines on cecal microbial profile, serotonergic activity, and aggressive behavior of recipient chickens. *Journal of Animal Science and Biotechnology*, 14(1), 66.

Neeno, S. M., Field, T. C., Cecil, M. R., Richert, B. T., Johnson, J. S., **Schinckel, A. P.**, & **Stwalley, R. M.** (2023). Design status and improvement opportunities for feed and behavioral monitoring of individually-housed sows. In 2023 ASABE Annual International Meeting (p. 1). American Society of Agricultural and Biological Engineers.

**Ni, J. Q.**, **Erasmus, M.**, Jones, D. R., & Campbell, D. L. (2023). Effectiveness and characteristics of a new technology to reduce ammonia, carbon dioxide, and particulate matter pollution in poultry production with artificial turf floor. *Environmental Technology & Innovation*, 29, 102976.

**Ogata, N.**, **Weng, H. Y.**, & L. McV. Messam, L. (2023). Temporal patterns of owner-pet relationship, stress, and loneliness during the COVID-19 pandemic, and the effect of pet ownership on mental health: A longitudinal survey. *PLOS One*, 18(4), e0284101.

Udell, M., Delgado, M., **Ekenstedt, K.**, Shoveller, A. K., & **Croney, C.** (2023). CATastrophic Myths Part 2: Common misconceptions about the environmental, nutritional, and genetic management of domestic cats and their welfare implications. *The Veterinary Journal*, 106029.

Weimer, S., **Fraley, G. S.**, Orłowski, S., **Karcher, D.**, Archer, G., Pierzchała-Koziec, K., & Scanes, C. G. (2023). Environmental impacts in domestic birds: Towards homeostasis, efficiency and well-being. *Frontiers in Physiology*, 14, 1281632.

**Weng, H. Y.**, & **Ogata, N.** (2023). The impact of COVID-19 pandemic on pet behavior and human-animal interaction: A longitudinal survey-based study in the United States. *Frontiers in Veterinary Science*, 10.