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## Shaping the Future for Laying Hens

### Spotlight on Faculty: Dr. Alexandra Harlander

By Kimberly Sheppard

Imagine the Austrian Alps.

You might envision a pastoral setting – lush green pastures against a backdrop of mountains, and cows grazing in the distance with big, golden cowbells around their necks. For Dr. Alexandra Harlander, this very setting was the picture of childhood – a childhood that has shaped her entire career.

Now an Assistant Professor in the Department of Animal Biosciences and CCSAW Associated Faculty, Harlander's early experience with animal life began on a dairy farm close to her home in the Alps, where cows came home with bells on!

“Every single day, my sister or I would walk the gravel road to the farm, to pick up the milk,” says Harlander. “We would pasteurize it on the stove at home, and my mom would use that in all her cooking.” This childhood chore introduced her to the importance of animal care and welfare in farming. Harlander became well acquainted with the cows' upkeep and care. “I remember we would always help to brush the cows. They were very well cared for – and they all got brushed – that was normal!”

Harlander also helped with the farmer's pigs and chickens, experiencing the circle of life first-hand, from the time the piglets and chicks arrived, to the time they were butchered for meat on the farm. And her close connection to the animals and farming instilled in her a life-long appreciation for animals and an interest in working with them. “From the time I was a child I wanted to become a zoologist,” says Harlander. “So my parents encouraged me to attend Veterinary College.”



*Dr. Alexandra Harlander  
with one of her research hens*

And she is grateful they did. Harlander's Doctor of Veterinary Medicine degree at the School of Veterinary Medicine in Vienna was her portal to the world of animal behaviour and welfare research, which is now her lifelong passion.

After veterinary college, Harlander became interested in the behaviour of free range laying hens – a husbandry system that was gaining popularity in Austria at the time. She continued on to complete a DVSc degree, with a thesis looking at the effect of pop hole size on hens' motivation to use the outside area.

"We learned that yard organization is much more important to the hens than pop-hole size," says Harlander "And that natural structures are more attractive to them for cover than man-made structures. I also noticed that some birds were feather pecking and feather eating, and wanted to learn more about why."

She soon had the opportunity to formally study this issue, when she accepted a PhD position examining the relationship between feather pecking and eating, funded by the German Research Foundation. "Feather pecking is a big problem, because it can lead to injury and even cannibalism." Her research on the topic won Harlander two awards, and led to the publication of nine scientific publications.

It also led her to become a lecturer at the University of Hohenheim and the faculty of Veterinary Medicine at the University of Giessen for a short time, before being offered a position at the University of Bern in Switzerland. Here she helped to build the University's poultry research program.

But it was the dream of building her own research program that finally drew Harlander to the University of Guelph, where she was offered a contractually-limited position in 2013.



*Alexandra Harlander (centre) as a child, with her sister Karin and mother Anita in her native Austrian Alps, where her passion for animals was formed through her early experiences with them*

Donations by Burnbrae Farms, the Poultry Industry Council, and the Canadian Poultry Research Council to the University of Guelph secured Dr. Harlander's position, and she accepted the Burnbrae Farms Professorship in Poultry Welfare in just over a year.

"I knew that North America was in transition between conventional and new housing systems for laying hens, and saw an opportunity to make a big difference!" says an enthusiastic Harlander. "This was a very exciting challenge! There was no question in my mind. I had to do this."

Harlander's move to Canada to study laying hen welfare in alternative systems could not be more timely. In early February of 2016, Egg Farmers of Canada (EFC) announced an industry-wide transition to alternative production methods for its egg-producing hens – a shift that will take 20 years to complete.

According to EFC, this major shift will yield an almost 50% restructuring in as early as 8 years from now and includes a commitment to cease the installation of any new conventional housing. Presently about 90% of egg production is in conventional housing. The other 10% or so is in enriched housing, free run, aviary or free range.

Whereas conventional cages restrict movement and offer no opportunity for hens to express natural behaviour, enriched cages offer more space and a nest box, dust bath, scratching area and perches – environmental elements proven to be valuable to hens. Aviary systems offer all these elements, as well as open-concept housing, often with multiple tiers for vertical movement of hens in a single hen house. Free range systems also allow access to the outdoors.

Harlander's research focuses on optimizing hen welfare in these alternative systems, particularly with respect to a welfare problem that affects all laying hens, regardless of housing type: keel bone damage and fractures.

"Keel bone damage is such a critical issue that extends to all housing systems, genetic lines, and management styles whereby pain, compromised welfare, and reduced productivity are likely outcomes," says Harlander. "It is assumed that collisions with and within a poultry housing system are one of the main sources leading to keel bone damage. With over 5 billion hens on a global scale, improvements to these systems have the potential to positively impact a huge population of animals."

Harlander was awarded funding through the AgriInnovation Program in 2013 to study the problem of keel bone damage in depth, which allowed her to hire three Masters students: Madison Kozak, Chantal LeBlanc and Stephanie LeBlanc. Their research focuses on understanding the development of locomotor and cognitive skills in laying hens as these contribute toward the ability of hens to safely navigate housing systems.



*On the left, MSc candidate Chantal LeBlanc tests a hen's ability to navigate various types and angles of ramps, toward optimizing hen house design*

*On the right a hen ascends a 50° wire ramp. MSc student Chantal LeBlanc found a 40° ramp to be optimal for birds*

Since falls and collisions play a large role in keel bone damage, Stephanie LeBlanc has analyzed how conditions such as overcrowding, low lighting, and poor physical health (such as foot, wing and keel damage) can impact the balancing strategies of laying hens.

She found that birds performed more correctional movements if they had foot pad dermatitis or feather damage on their wings. Hens would not jump from perches if they were in a low-light/masked environment and could not gauge their surroundings. Bird movements were also less intense in low-light environments and when there was restricted space (crowding) on a perch.

In addition, Chantal LeBlanc is acquiring first ever knowledge on how hens navigate multi-tier aviary systems during rearing, including how they manage various inclined walkways and ramps. Determining the maximum incline and ramp design that laying hens can master is critical information for producers installing new systems.

Her research has shown that both chicks and adult fowl will walk up 40° inclines, but begin flapping their wings to assist them with climbing anything steeper than this. She found that wire grid surfaces were important for improved hind-limb contact on steep inclines and reduced the amount of wing use. The application of this work is for the design of three-dimensional housing systems, and suggests providing 40° inclines which are more easily negotiated by chicks and adult fowl.

Madison Kozak is conducting the first study that investigates how chickens of different ages and strains navigate aviary systems, specifically which angles and directions they can master without colliding with the housing system or enrichment.

She has found that chicks of 1-9 weeks of age moved more frequently on horizontal ground and preferred horizontal surfaces, while inclined surfaces were used only from weeks 2-5 with a maximum during weeks 2 and 3.

The results provide new insight on the suitability of commercial aviaries for all ages and strains of chickens, and how we can improve the design of current aviaries to reduce injuries and improve chicken welfare across Canada and worldwide.

Not only is Harlander interested in the impact of barn structure on hen welfare, but also the litter substrate suitability for different housing systems and how it impacts air quality for hens. PhD student Bishwo Pokharel is investigating hen preference for litter type, and behavioural responses of laying hens exposed to different concentrations of gases, particularly ammonia.

Dr. Harlander's interest in the causes of feather pecking and eating is also being further investigated, together with her PhD student Patrick Birkel. Despite over 50 years of research to alleviate this problem, the underlying mechanisms of feather pecking have never been fully understood and no practical solution has emerged.

Birkel's research focus is on understanding the mechanisms for feather-pecking and eating behaviour in laying hens. He aims to identify environments likely to both reduce feather pecking and prevent motivational frustration to perform abnormal behaviour. He is also working to determine whether motivational frustration and brain and/or gut dysfunction are complimentary to explain different aspects of feather pecking/eating. He is hoping that through a better understanding of the underlying causes and how they interact, suggestions can be made on how to prevent feather pecking in practice.

As new hen housing systems are put into place across Canada, Harlander and her growing research team will be at the ready, producing and communicating sound data necessary to help establish new, high-care standards for laying hens.

The Harlander lab currently includes Dr. Alexandra Harlander, Patrick Birkel, Ilka Boecker, Jackie Chow, Madison Kozak, Chantal LeBlanc, Luxan Jeyachanthiran, Peter McBride and Bishwo Pokharel. †

## B4 U GET A PET Website Informs Future Pet Parents



Getting a pet is an exciting proposition – furry friends provide companionship and nurture the human-animal bond – but having the right information and making the right choices can be a challenge to future pet owners whether they are bringing home their first pet or their tenth.

A new website for future pet parents eases the process even before getting a pet, with easily accessible guidance about socialization, introducing your pet to your household, including kids, adults and other pets, as well as realistic budgeting considerations.

“It’s important for us to choose a pet that matches our lifestyle and expectations so we are sure to find the right pet personality for our situation and household,” says Dr. Jason Coe, Campbell Centre Associated Faculty member in the Ontario Veterinary College’s (OVC) Department of Population Medicine.

“Research has shown that the success of a human-companion animal relationship is influenced by whether an owner’s expectations can be met by the pet and whether the needs and lifestyle of the owner and personality of their pet match,” adds Coe.

Developed by Coe and his team, the [b4ugetapet.ca](http://b4ugetapet.ca) website brings together practical, evidence-based information in an accessible, easy-to-search website.

Coe recently completed a 5-year term as Nestlé Purina PetCare Canada Chair in Communications, focusing on

research, communications and an outreach program to address positive behavior training, pet overpopulation and pet abandonment.

This visionary Chair was established in 2010 at the University of Guelph’s OVC through a generous gift by Nestlé Purina PetCare Canada to improve the relationship between companion animals and people through research and education.

B4 U GET A PET puts this knowledge into practice, says Coe. It’s a practical resource to help people prepare for pet ownership even before bringing an animal into their home.

It also encourages pet parents to consider some important questions surrounding lifestyle, personality, compatibility and caretaking when choosing their new companion.

“Do I want a laid back dog or cat, an affectionate one, active, protective, one that stays by my side?” asks Coe. “How much time do I want to spend with my pet, how often will I take him or her to the veterinarian? And in the case of cats, is my household high, low or moderate volume for traffic and noise?”

A fun cat and dog quiz not only prompts potential owners to test their knowledge, it addresses some common misconceptions and uses proven resources in the responses. The website also provides specific questions prospective owners can ask whether they are sourcing their new pet

from a breeder, animal shelter or rescue, pet store, online source or from a friend. “Regardless of the source – breeder, shelter, pet store, online or a friend, there are a number of questions we should be asking when getting a new pet. We want to be sure we are making an informed decision, because ensuring a lasting relationship even before it starts is in both the pet’s and our best interest,” adds Coe.

Check the website often for regular blogs on topical subjects and link to the b4ugetapet Twitter and Facebook pages to stay in touch.

The Coe lab includes Dr. Jason Coe, Dr. Janet Cutler, Dr. Tyler Flockhart, Aileigh Kay, Dr. Kim Lambert, Rachel O’Connor and Tasha Welch. †



Dr. Jason Coe

**Feature**

## Saputo Dairy Care Program



# Saputo

“This new program fits nicely with our mission to promote the welfare of animals through research, outreach and education” says Tina Widowski

The Campbell Centre and Saputo Inc. have partnered to create a new animal welfare program at the University of Guelph. The Saputo Dairy Care Program was made possible by a \$500,000 gift from Saputo Inc. and resulted in the creation of a new staff position, the Saputo Dairy Care Manager. Dr. Lena Levison, OVC graduate and animal welfare scientist, has assumed this role.

Together with CCSAW Associated Faculty the program will be delivered through the Ontario Veterinary College and will focus on providing practical dairy welfare education to practicing dairy veterinarians, and dairy producers, and it will also include a dedicated

Dairy Welfare rotation for Doctor of Veterinary Medicine students in the final year of study.

A brand new Phase IV rotation for DVM students in their final year of study has also been created, called “Dairy Cattle Welfare.” It will be a week-long rotation at the Ontario Veterinary College, offered twice during the academic year – once in each of the Fall and Winter semesters. With financial support from Saputo Inc., space has been set-aside for DVM students from other veterinary colleges in Canada to participate in this rotation. Some funding is available to help defer the cost of their attendance.

“This new program fits nicely with our mission to promote the welfare of animals through research, outreach and education” says Tina Widowski, Professor of Animal and Poultry Science and Director, Campbell Centre for the Study of Animal Welfare. “It will compliment and help expand current animal health and well-being learning opportunities offered at the University of Guelph.”

The investment is a part of the company’s launch of a new Animal Welfare Policy. Investments have also been made into two dairy welfare initiatives at the University of Wisconsin-Madison School of Veterinary Medicine. †

## Honouring the Animals

By Kimberly Sheppard

Since prehistoric times, humans have recognized their relationships with animals, as evidenced by ancient petroglyphs carved into stone. Tens of thousands of years after the first stone carvings, we began domesticating animals for food, developing new ways of working and living with them over the centuries.

Today, animals touch so many areas of our lives – as providers of companionship, food, clothing, entertainment, protection, education, transportation, sport, and as research subjects and labourers. As we work with and care for them, bonds between humans and animals inevitably form, and the need to recognize these relationships and acknowledge the animals’ service to us is widespread.

Around the world, ceremonies, services, tributes and other formal events have been established to memorialize and recognize the animals we use. They may be religious or secular; they may be about the animals such as recognizing them, or they may include the animals, such as blessing them or releasing them as “prayer animals.” They exist in all varieties.

Regardless of the type of recognition, there is a common thread among all: These events are greatly appreciated by the attendees who have worked with the animals, and validation



*The Branion Plaza Marker, which appears on the cover of CCSAW News, Issue 25: “In recognition of the animals used by the University of Guelph community in support of excellence in teaching and research. Established April 1993”*

of individuals’ thoughts and feelings may result in improved morale and conditions for the human and animal partners (Iloff, 2002).

Dr. Hank Davis, Campbell Centre Associated Faculty member and one of the Centre’s early contributors tells us, in his own words, of his experience with establishing a tribute for the animals at the University of Guelph, the first such event of its kind in North America. †

## Animal Memorial Services at the University of Guelph

### A Personal Recollection

By Dr. Hank Davis

Back in the 1990s I had a busy lab in the Psychology Department with a whole team of undergraduate and graduate students. The program was coordinated by my post-doctoral student, Allison Taylor. Allison was an ideal choice: she had a background in both Psychology and Animal Science. That kind of hybrid approach was exactly what my research needed. We were studying whether animals could recognize individual humans and we wanted to test it with as many different species as possible.

Obviously there was no point in using dogs and cats. Everybody knows they can do it and positive results wouldn’t have surprised anyone. Instead we were going to work with “exotics” – the kind of animals whose ability to discriminate between humans might be a little more surprising to most people.

We began with rats and went through every species we could get our hands on. The list included cows, chickens, rabbits, seals, emu, rhea, honeybees, and penguins and everybody’s favorite: hissing cockroaches. They all passed with flying colors. Our results were published in a host of scientific journals and even appeared on the Discovery channel.

The results made it clear that each of these species was a little “smarter” than we believed, even though they went about their business using different sensory processes than humans might under similar testing. Along with its contribution to “Comparative Cognition,” our research also had some pretty clear implications for Animal Welfare. Once an animal can discriminate a particular human from others, it can associate that human with positive – or negative – experiences.

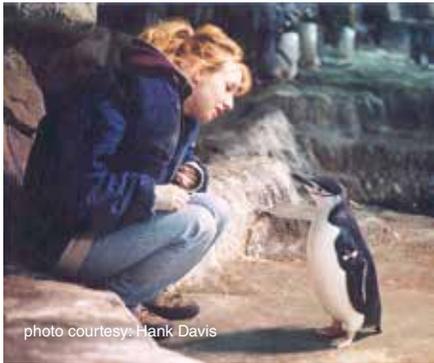


photo courtesy: Hank Davis

*Ann Silver establishes rapport with a gentoo penguin*



photo courtesy: Hank Davis

*Lisa Collis with two "friendly" honeybees*



photo courtesy: Hank Davis

*Hank Davis "up close and personal" with a camel, twenty years before starting his research project*

**"Within weeks I was in touch with colleagues at other universities who reported that our ceremonies here at Guelph had inspired them to begin their own memorial traditions modeled after ours."**

In short, caretakers and technicians could become predictors of events in the animal's life. Their welfare, whether on the farm, in the zoo or in the lab, was affected by more than cage size and diet. Those repeated experiences with particular people might yield strong emotional experiences that could make for a good day or a pretty horrible one. By acknowledging the animals' ability to tell us apart, we were opening a whole new dimension to determining their welfare.

The work in my lab and in the field was rewarding and fun. Everybody got along well, and the results were having an impact. We were really fortunate and we knew it. One weekend as we closed up, I said to Allison "We really ought to do something to commemorate this moment. I wish the animals knew how much they're helping us." Allison pointed out that animals were contributing all over campus: in Psychology, Animal Science, the Vet School, Zoology, Environmental Biology...The list was long, especially here at Guelph. We left on that note, wishing we could do something formal.

Something happened that weekend – a happy coincidence. I wish I could remember the details more clearly, but I know when we came in on Monday morning one of us had seen a newspaper article or heard a radio interview about a ceremony in which Japanese research institutions had Memorial Services for the animals they had used in the past year. Although they were part of the Buddhist tradition, the ceremonies themselves were secular. They were widely

attended events open to the entire campus. Faculty came, along with students and staff. Everyone was part of it, even the secretaries who typed the manuscripts (this was a different era).

Why couldn't we do this here? Amazingly, to me and Allison anyway, there was no precedent in North America. We would be breaking new ground if we held such an Animal Memorial Service.

For a day or two we said little, each of us incubating the idea. Then we discussed it with the students in the lab. They were predictably excited, wanting to start work on it immediately. We told everyone to wait; we would need to do this "officially." We'd want to get the Animal Care Committee (ACC) involved. That was easy: I represented my College on the ACC. We also wanted to do this under the aegis of CSAW, prior to its founding as the Campbell Center. There was a CSAW Steering Committee to keep plans moving along, and so I brought our plan forward.

Most of the Committee was enthusiastically in support, although we met some resistance from members who feared that "because animals did not have souls, they did not deserve a Memorial Service."

We went ahead with our yearly ceremony, and received some wonderful feedback for our efforts. The Globe & Mail gave us front page coverage and I was invited by AALAS (American Association of Laboratory Animal Science) to lead a symposium on Animal Memorial Services at the AALAS national meeting. Within weeks I was in touch with colleagues at other universities who reported that our ceremonies here at Guelph had inspired them to begin their own memorial traditions modeled after ours.

The final piece of the story concerns the memorial stone: a lovely piece of rough granite with a brass plaque saying "In recognition of the animals used by the University of Guelph community in support of excellence in teaching

## Teaching and Reaching the Children

By Kimberly Sheppard

Care of ‘magical creatures’?! Oh yes! Magical creatures and so much more! The CCSAW Student Chapter has been wonderfully busy, teaching children about animal welfare through learning activities, in a way that truly speaks to them.

Four hundred children and their parents attended the “School of Witchcraft and Wizardry” to learn about the Care of Magical Creatures such as the motivation of cats to hide and hunt, owl nutrition and digestion, and thermoregulation and environmental needs of lizards and other ‘magical’ animals.

This fun day was part of the “Let’s Talk Science” program – a charitable organization of volunteers spread out across 41 different colleges and universities across Canada, including the University of Guelph. Let’s Talk Science focuses on Science, Technology, Math and Engineering (STEM) outreach in the community, and is free to attend.

“Involvement in community programs is a great way to introduce, engage and educate kids and other community members, about animal behaviour and welfare science,” says Carly Moody, Student Chapter President for 2015/16.

The Student Chapter also developed a Dairy Welfare education day, which they offered twice over the summer for school-aged children. Created with help from Dairy Farmers of Ontario as part of the Creative Encounters with Science program, the day included learning the life cycle of the dairy cow from birth to death, typical management practices, and housing types for dairy cows, and welfare concerns specific to dairy cows.

Students played a game of jeopardy that tested their new knowledge of dairy systems and animal welfare, and then broke into small groups and designed their “perfect” dairy barn before explaining to the group why they chose certain features to ensure their cows had good welfare in their barns. Creative Encounters is a non-profit organization that promotes science, technology, and engineering amongst youth in Guelph and surrounding communities.

“I think the kids left with a much better understanding of animal welfare and they seemed to have a really good time in the process” said Jackie Jacobs, who was President of the Student Chapter in 2014/15. “They were really engaged during the presentations and activities and they asked a lot of great questions that demonstrated their interest in



*Animal Memorial Service,  
University of Guelph, ca. 1995*

and research.” Nowhere in our ceremonies, by the way, did we ever say we wanted to thank the animals. It may have felt natural to say so, but it wasn’t true. There was no informed consent, as the lawyers would say. Their contribution was not voluntary. We may treat the animals humanely, but a lot of the things we’ve done over the years were “taken,” not “given.” And so we acknowledged the animals’ service to us. But we never pretended it was a voluntary contribution.

The University should be acknowledged for its generosity in paying for the memorial stone and plaque. Them, we can thank. It was a generous gift and it still stands, in front of the University Center, next to Zavitz Hall, where squirrels perch on it and students see it every day.

With the passing years, the Animal Memorial Service seems to have gone astray. My post doc, Allison, left the University and for a while I carried on the yearly ceremony with Denna Benn, Secretary of the ACC and Director of Animal Care Services at the time. But that went by the wayside too. At this point it will take a couple of energetic, like-minded individuals to resurrect this yearly tradition. I can promise that the university environment will be the richer for it, and I’d be happy to help in any way I can. †

Hank Davis  
Professor Emeritus  
Psychology Department  
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*A day of learning about dairy cow welfare with the Student Chapter, at the Creative Encounters with Science program*

the topic. I'm looking forward to offering it again, maybe with a change of species each year!"

Annual Student Chapter activities included a behind-the-scenes trip to the Toronto Zoo to learn about and discuss zoo animal welfare. Students were prepared for their zoo visit by attending a talk on the subject by PhD candidate Judy Stryker, who studies thermoregulation of zoo animals.

Students also participated in an annual behind-the-scenes tour of the University of Guelph's Central Animal Facility. Prior to the tour, Mike Walker, PhD candidate, gave a talk on lab rodent welfare.

"Facility tours allow undergraduates to leave the classroom and observe animals in a particular living environment, allowing a first-hand approach to learning and discussing animal welfare principals, issues and practices," says Carly Moody.

This past September, the Student Chapter also recruited 150 new undergraduates, and held an information session for close to 40 students interested in graduate school focussing on animal welfare.

We are so fortunate to have such an enthusiastic, lively group, with genuine passion for improving animal welfare in a wide variety of ways! 🙌



*Carly Moody, Student Chapter President 2015/16, talking to children about owl nutrition and digestion*



*Students tour the Central Animal Facility each year to gain a better understanding of lab animal care*

## Gayle Ecker Wins Prestigious Equine Industry Vision Award

A Lifetime Dedicated to Horse Health, Safety and Welfare is Recognized

By Kimberly Sheppard

Ecker and her team are continually developing new ways of presenting information, including shorter online courses, using interactive learning tools as part of the curriculum such as the “Horseowner Toolbox” on the Equine Guelph website.

Leadership, commitment, dedication and willingness to serve...attributes required to win the prestigious Equine Industry Vision Award, and attributes that Gayle Ecker, Director of Equine Guelph, seems to be the embodiment of. As the 2015 winner of this award, Ecker has demonstrated an unwavering commitment to horse health and welfare through the education programs she and her team have developed and taught.

In fact, Ecker was instrumental in the creation of Equine Guelph itself, by writing the grant proposal that led to the development of its education and communications programs in 2002. At that time she established a first-of-its kind educational approach that provides virtual learning pathways for career development in the equine industry.

That approach has helped to drive Ecker’s success and has led to Equine Guelph’s reputation as leaders in Equine Education today. Ecker and her team have developed a number of award-winning programs, including over 20 online courses supporting health and welfare.

The Equine Welfare Certificate program, developed in collaboration with the Campbell Centre and the Centre for Open Learning, has produced close to 20 graduates each year since 2012. Students who have graduated from this program use it across all areas of the industry.

“We have several students that are currently at horse rescue farms as staff, educators or volunteers. Others see it as an important component of their developing expertise as they run



Gayle Ecker, Director of Equine Guelph, receives Equine Industry Vision Award from Kate Russo of Zoetis



Gayle Ecker teaching a group about horse anatomy at the Can-Am All Breeds Equine Expo



various coaching, boarding or training facilities,” says Ecker. “We also have students that are part of the staff or boards of equine associations and they want to ensure that welfare is a top priority for their association, so they are keen to learn welfare from an evidence-based foundation.”

Ecker has also led the development of a number of outreach programs, including the award-winning and popular “EquiMania!” youth exhibit. This interactive exhibit, promoting safety, welfare and career opportunities is a crowd favorite at the annual Royal Winter Fair, and was a popular feature at the World Equestrian Games in 2010. The exhibit helps Ecker to instill a well-rounded appreciation for horses at an early age.

“We hope to get them passionate about health and welfare of horses early, and eventually take the online courses that are part of the certificate/ diploma program we offer,” says Ecker. “What is so rewarding about this is that I see a ripple effect of these courses, as our students are in turn teaching their students and I see the health, welfare, and safety knowledge being passed on beyond our online classrooms!”

Other feature programs include large animal technical rescue training, horse owner online tools, equine welfare assessment training, and promotion of the new Code of Practice for

the Care and Handling of Equines. Though horse welfare has always been a common thread in all the programs, Equine Guelph has placed a greater lens on the welfare issue over the past three years.

Ecker feels that the ‘unwanted horse’ is a major concern for the industry, so there is a focus on Full Circle Responsibility issues. Because there are more unwanted horses, people who have never owned horses before are taking them in.

“One of the biggest challenges right now is helping the new horse owner who may not have much experience in horse (or animal) ownership and obligations as we have more people growing up in an urban environment,” says Ecker. “The new owner is keen and eager and cares deeply about their horse, but they may not have the knowledge they need to effectively prevent many health and welfare problems of horses.”

To reach a broad and varied audience, Ecker and her team are continually developing new ways of presenting information, including shorter online courses, using interactive learning tools as part of the curriculum such as the “Horseowner Toolbox” on the Equine Guelph website.

Several of these tools, like the colic risk calculator, the biosecurity risk calculator, and the Code Decoder,

help horse owners to systematically assess their management process and help pinpoint areas of improvement for horse health and welfare.

So where does this great passion for horses stem from? Ecker has had horses in her life for as long as she can remember. “My parents put me up on a horse before I could even walk, and I think I was hooked from the start!”

“I have been very fortunate to have had horses as a part of my life from then on, and this interest has been combined with my experience as a horse trainer and coach and in the show ring, along with experience working with a veterinarian for many years, my education degree, and my Masters degree,” says Ecker. “They have all contributed to my career in many ways and contributed to my desire to build an evidence-based online education program that was accessible and affordable for horse owners, no matter where they live.”

Ecker began her career in horse exercise physiology research. She has been the assistant chef d’equipe for the Canadian Endurance Team, traveling around the globe to support the team at international events, such as the Pan American Games, the World Equestrian Games and World Endurance Championships.

Ecker also was named to the Can-Am All Breeds Equine Expo Hall of Fame in 2014, when she received the Builder Award. In 2010, she received the Readers’ Choice Award in the exceptional equestrian category from the Horse Journal. Ecker also was named one of the top 15 horse people of the year by Western Horse Review in 2008.

### **Congratulations to Gayle on many successes!**

*\*The Equine Industry Vision Award is sponsored by Zoetis *

## University of Guelph Celebrates Success at Welfare Judging Competition

By Melissa Herman

University of Guelph Undergraduate, Graduate and Veterinary teams celebrated both individual and team-wide success at the 2015 Intercollegiate Animal Welfare Judging Competition held at Ohio State University.

Thanks to the generosity of the Campbell Centre for the Study of Animal Welfare, American Pre-Veterinary Medical Association (APVMA) and Student APVMA, Animal Behaviour and Welfare Group, and Ohio Eggs, the University of Guelph was again able to participate in the annual North American-wide event.

The undergraduate team, coached by Dr. Ian Duncan, included Kaitlyn Dancy, Caroline Graefin, Melissa Herman, Ashley Stanford, and Siarra Tiffany.

The graduate team, coached by Dr. Janet Cutler and Jackie Jacobs, was comprised of Amanda Armstrong, Meghan Callon, Andrea Habinski, Joanna Smich, and Tanya Wilson. The veterinary team, coached by Dr. Derek Haley, featured Goldia Chan, Rebecca Chant, Tara Hayes, Sophia Marin, and Julia Robertson.

After weeks of preparation spent learning about the species to be evaluated, practicing speeches, and becoming acquainted with team members, the group of 15 somewhat nervous and excited undergraduate and veterinary students headed off to Ohio ready for an intense weekend of academic competition.

Following a brief introduction, contestants heard presentations by experts on the welfare of llamas, Asian elephants, draft horses, and Jersey cows, in order to learn about the most important areas of concern for each category. The live assessment included a tour of a Jersey cow farm to assess the welfare of calves and heifers on the farm. Teams then had to quickly prepare and present their speeches on their findings, including three areas of improvement for the farm.

Students individually evaluated the welfare of working horses, llamas and Asian elephants. Two facilities were presented for each category, and after quick deliberation, participants had to decide which facility provided superior welfare. They then had limited time to present a facility comparison and why they chose the winning facility.

**Congratulations to all team members for their outstanding performance and success and to our fabulous coaches for their dedication, commitment and inspiration.**

After an intense competition, the University of Guelph celebrated both individual and team-wide success. Out of the 44 contestants in the undergraduate division, Melissa Herman placed second overall, and Kaitlyn Dancy placed third. Meghan Callon placed third and Tanya Wilson placed fifth in the graduate student division, out of 11 students.

In the veterinary division Julia Robertson placed first out of 45 students.

Congratulations to all team members for their outstanding performance and success and to our fabulous coaches for their dedication, commitment and inspiration. This event provided students with the opportunity to work with some fantastic coaches and peers, as well as improve public speaking skills while critically thinking through evidence based arguments for the welfare of animals. †



*The OVC welfare judging team, left to right: Tara Hayes, Sophia Marin, Goldia Chan, Rebecca Chant (up close, in the foreground), and Julia Robertson.*

## Top Video Prize Awarded to Catalina Medrano-Galarza

An Ontario Veterinary College PhD student received top marks for her research video at a recent dairy research symposium. Catalina Medrano-Galarza, a PhD Candidate in the Department of Population Medicine, OVC, took top spot in the “My Research in 180 Seconds” contest.

Dairy Farmers of Canada held a research symposium at the Chateau Laurier Hotel in Ottawa, Ontario, in early February, to deliver the latest findings in dairy production and human nutrition and health research to Canadian dairy farmers and stakeholders.

In the lead-up to the event, Symposium organizers invited graduate students who are conducting research activities funded by the Dairy Research Cluster to prepare a short video of no more than 180 seconds showcasing their work. All videos submitted were screened by an internal selection committee and the graduate student authors of the top four video presentations that were short-listed had all their expenses paid to attend the Symposium in-person. There, the four top videos were played as part of the symposium, for everyone to see, and the audience voted to declare a final winner.

The audience voted first place prize to Medrano-Galarza. She was trained as a veterinarian in Colombia and has a Masters degree in Animal Welfare from the University of Edinburgh in Scotland. She came to Guelph in May, 2014 to begin her PhD studies on a Dairy Research Cluster project led by CCSAW Associated Faculty Member and Steering Committee Chair Dr. Derek Haley, on the use of computer-controlled feeding systems used for rearing young calves on dairy farms. Medrano-Galarza is co-advised by Drs. Haley and Stephen LeBlanc.

The video is based on a Canada-wide survey put together to collect information about the calf feeding and management practices on dairy farms across Canada.

To watch the video, visit the Campbell Centre website:

[www.uoguelph.ca/ccsaw](http://www.uoguelph.ca/ccsaw) 📺



## Are you a U of G student interested in studying animal welfare? Join the CCSAW Student Chapter and get involved!

The CCSAW Student Chapter is a student run club that helps connect students interested in animal welfare to events, seminars, and activities that occur across campus and in the community. The Student Chapter is managed by graduate students from the Animal Behaviour and Welfare group based in the Animal and Poultry Science Department and Population Medicine. However, animal welfare study opportunities span the campus, as we have Associated Faculty in not only the sciences, but the Arts, Geography and History!

The majority of members are undergraduates seeking more information on animal welfare related career paths and opportunities. Membership is open to students from all disciplines across campus, and no previous knowledge of animal behaviour or welfare is required.

Regular updates are sent to members in a monthly newsletter and email reminders for upcoming welfare related seminars, field trips, competitions, and fundraisers. How can you benefit by joining?

### LEARN!!

- about the field of animal welfare science
- about Work-study opportunities first
- about Summer Student opportunities first
- through events and seminars
- meet animal welfare scientists from around the world

### VOLUNTEER!!

- at the education booth
- with animal behaviour and welfare research projects

### PARTICIPATE!!

- in education and outreach activities
- in field trips to the Toronto Zoo, SPCA etc.
- in student writing competitions

To join the CCSAW Student Chapter, contact the club's president, Carly Moody: [cmoody@uoguelph.ca](mailto:cmoody@uoguelph.ca)



2015/16 Student Chapter Executive (left to right): Carly Moody, Tanya Wilson, Cata Medrano-Galarza, Kenlyn Ramsey, Morgan Ellis

## Completion of PhD Projects

**Jamie Ahloy Dallaire**, Animal and Poultry Science

*Investigating the Functions of Rough-and-Tumble Play in American Mink, Neovison vison*

**Maria Diez-Leon**, PhD, Animal and Poultry Science

*Effects of environmental enrichment on stereotypic behaviour and reproduction in American mink Neovison vison*

**Amir Eslami Ghane**, PhD,

Animal and Poultry Science

*Investigating the importance of Early Feeding (posthatch) and Proactive Incubation Profiling on Liveability and Early Performance of Turkey Poult*

**Heather McDonald Kinkaid**,

Animal and Poultry Science

*Species-Level Determinants of Stereotypic Behaviour, Reproductive Success, and Lifespan in Captive Parrots (Psittaciformes)*

**Walter Sánchez-Suárez**

*What does it feel like to be a bat?*

*Searching for ways to investigate conscious emotion in non-human animals*

## Completion of Thesis-based MSc. and MA Projects

**Katharine Anderson**, MA, History

*Hitched Horse, Milked Cow, Killed Pig: Pragmatic Stewardship and the Paradox of Human/Animal Relationships in Southern Ontario, 1900-1920*

**Anna Chow**, MLA, Environmental Design and Rural Development

*Exploring public perceptions of the Guelph Humane Society facilities as a centre for human-animal and community interaction*

**Emily Kaufman**, Animal and

Poultry Science

*Monitoring transition dairy cow behaviour for the detection of subclinical ketosis*

**Jeanette Kroshko**, MSc, Animal and

Poultry Science

*Population-level risk factors for stereotypic behaviour and infant mortality in captive carnivores*

**Morgan Overvest**, Animal and

Poultry Science

*Effect of feeding strategy and social housing on behaviour at weaning in dairy calves*

**Liam Rémillard**, MSc, Population Medicine

*Exploring the grief experience among bereaved pet owners*

**Weiguang Wang**, MSc, Food,

Agricultural and Resource Economics, August 2014

*Two essays on stated choice analysis of demand for eggs from enhanced animal welfare production systems*

**Tasha Welch**, MSc, Population

Medicine

*Motivations for and thoughts toward rabbit ownership and factors contributing to companion-rabbit owners' knowledge*

**Emily Miller-Cushon**, Animal and

Poultry Science

*Expression and Development of Feeding Behaviour in Dairy Calves*

To read thesis dissertations, visit the University of Guelph Atrium: [atrium.lib.uoguelph.ca](http://atrium.lib.uoguelph.ca)



## First Ever ‘Innovation Grant’ Awarded To Dr. Katrina Merkies, by Horses and Humans Research Foundation

Do horses sense when we are distressed? And if so, how does this ‘horse intuition’ affect them, and their response to the situation?

Learning whether horses distinguish between neurotypical and mentally traumatized humans is the aim of a project that has won Dr. Katrina Merkies the first ever ‘Innovation Research Grant’ awarded by Horses and Humans Research Foundation.

The \$10,000 award will be used to determine how equine-assisted activities (EAA) affect horses. There is a growing body of research expounding the effects of equine-assisted activities on humans, but very little scientific research in the area of how these therapies affect the horse.

“Humans working in the world of social work, psychology and psychiatry experience a high degree of stress. It is reasonable to assume that animals placed in similar environments would also experience stress” says Merkies.

Dr. Merkies and her team believe the results will significantly contribute to the direction and validation of future research on the impact of horses-human interactions.

Understanding how the horse responds both physiologically and behaviorally in the horse-human interaction is a first step in understanding the experience from the horse’s point of view. Merkies’ hypothesis is that horses will distinguish between clinically “normal” humans and those experiencing psychological trauma (ie. Post-Traumatic Stress Disorder). She hypothesizes that they will respond differently, even though exposed to the same external human behaviors – meaning, the horse would respond to the emotional energy rather than purely the physical behaviors.

Dr. Merkies and her team believe the results will significantly contribute to the direction and validation of future research on the impact of horses-human interactions. “Understanding the horse’s role in the processes involved in equine-assisted therapy is essential for furthering research into EAA not only from the human perspective, but from the lens of horse welfare to minimize stressful experiences for the horse and ensure participant safety” says Merkies. †



*A new research project led by Dr. Katrina Merkies will investigate how equine-assisted activities affect the horse*

## Animal Behaviour and Welfare Seminar Series

Our Animal Behaviour and Welfare Seminar Series has become so popular that we've had to move! We are now permanently in a larger room (Room 1800, Pathobiology/AHL Building).

Since our webcasts have also been so well-attended, beginning in March we will be live-streaming our seminars to make them more accessible to all; You will be able to join in during the talk, or watch them on Youtube at your leisure!

Please visit the CCSAW website for more details and to view past webinars: [www.uoguelph.ca/ccsaw](http://www.uoguelph.ca/ccsaw)



**If you missed any of our talks, you can still see them on the CCSAW website!**

**Anthropomorphism in Animal Cognition Research**  
Prof. Kristin Andrews, York University

**Consumer Perspectives on Animal Welfare: What They Think, What They Know and why it Matters**

Prof. Michael Von Massow, University of Guelph

**The Welfare of Animals without Owners**

Dr. Tyler Flockhart, University of Guelph

**A Utilitarian Perspective on Companion Animals**

Prof. Gary Varner, Texas A&M University

## 9<sup>th</sup> Annual Animal Welfare Research Symposium!

Our Research Symposium will be held Wednesday, May 11<sup>th</sup>, from 9am–5pm in Room 1800 Pathobiology/AHL

Featuring Keynote Speaker Dr. Marian Dawkins, Professor of Animal Behaviour, Department of Zoology, University of Oxford: Can Animal Welfare Science Resolve the Paradox of Animal Consciousness?

Register today! [www.uoguelph.ca/ccsaw](http://www.uoguelph.ca/ccsaw)

### The Campbell Centre for the Study of Animal Welfare

To learn about how you can support the centre or to join our e-mail list, go to: [www.uoguelph.ca/ccsaw](http://www.uoguelph.ca/ccsaw) or write to:

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