

This issue marks the 100th *Bluegrass Equine Digest*. The free multiple-award-winning monthly electronic newsletter is dedicated to providing up-to-date information on equine research from the University of Kentucky's (UK) College of Agriculture, Food and Environment. This has been done in partnership with TheHorse.com and sponsored and supported by Zoetis since its inception.

Since 2009, the *Bluegrass Equine Digest* has covered topics you might expect from a leading land-grant university with an excellent equine focus, ranging from infectious diseases to forages and nutrition to reproductive research to parasitology to genetics. The publication has also demonstrated the depth and breadth of the equine focus at UK with topics that include economics, engineering, law, entomology, diagnostics, biosecurity, graduate student spotlights, and more.

The publication's intent has always been to provide a digest of stories to meet the needs of a wide variety of horse interests. In each issue, readers are as likely to find a technical description of findings from a recent study into equine health as they are to learn about toxic plants or weed control. Additionally, readers can find many hallmarks of the extension focus of a land-grant institution—getting information out to those who are managing horses and their environments, on a

very large or a very small scale.

Every issue of the *Bluegrass Equine Digest* in its entirety is available at equine.ca.uky.edu/bed-past-issues.

Find a selection of the standout articles from the past 99 issues starting on page 12. 

>Holly Wiemers, MA, APR, is the communications director for UK Ag Equine Programs.

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Foal Immunodeficiency Syndrome Test Now Available at Genetic Testing at Gluck



THOMAS LUNZER/WIKIMEDIA COMMONS

Mutation carriers show no outward signs, so it is important to determine if a horse is a carrier prior to breeding.

important to determine if a horse is a carrier for this mutation prior to breeding.

The cost is \$45 for each test. Submission forms and instructions are available at getgluck.ca.uky.edu/content/submission-forms.

For more information or questions, contact Kathryn Graves, PhD, GeT at Gluck director, at 859/218-1193 or ktgraves@uky.edu. **UK**

>Jenny Evans, MFA, is the senior veterinary science marketing and promotion specialist at the UK Gluck Equine Research Center.

UK Freshman Dion Compton Receives Inaugural Legacy Equine Foundation Scholarship

Dion Compton, a UK freshman and Lexington, Kentucky, native majoring in equine science and management and minoring in business, recently received an inaugural scholarship through the Legacy Equine Foundation.

The foundation is a Lexington-based nonprofit organization that encompasses the Legacy Equine Academy and the Legacy Ball. The academy identifies promising African-American youth and other students of color to educate them about horse industry opportunities. Proceeds from the Legacy Ball help fund scholarships and community-based alliances that foster equine industry diversity, inclusion, and growth.

Genetic Testing (GeT) at Gluck is now offering a test for foal immunodeficiency syndrome (FIS).

Foal immunodeficiency syndrome is an autosomal recessive disorder, meaning an affected foal must receive a copy of the mutation from each parent. The mutation occurs in the *SLC5A3* gene and results in a B lymphocyte deficiency. Affected foals cannot produce their own antibodies and eventually succumb to infection as maternal antibodies supplied by the mare's colostrum dwindle by 3 to 6 weeks of age. Foals either die or fail to thrive to the point that they are euthanized.

About 30% of Fell Ponies and 18% of Dales Ponies are carriers. Gypsy Horses can also be affected, most likely due to Fell Pony crosses. Because carriers of the mutation show no outward signs, it is

Compton formally received the scholarship from Legacy Equine Foundation representatives at a ceremony hosted by UK's College of Agriculture, Food and Environment. The scholarship provides \$1,000 per year and is renewable for each of his four years in school.

"Dion epitomizes the Legacy Equine Foundation program as a true 'Legacy Leader,'" said Ronald W. Mack, the foundation's executive director. "I've admired his passion for equine studies, as well as his determination to make that passion into his life's work. He also represents his family, his school, and his community with the excellent qualities we look for in our next generation of equine professionals. We are so proud and excited to present Dion Compton with our inaugural Legacy Equine Foundation Scholarship."

Compton attended Tates Creek High School and Locust Trace AgriScience Center, where he was vice president of that Future Farmers of America chapter from 2016-17. He also received the

Masthead

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The Horse: Your Guide To Equine Health Care

Erica Larson, News Editor

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Dion Compton

Junior Achievement “business competition” award in 2017, served on the Principal’s Advisory Council at Tates Creek and Locust Trace, and received the William C. Parker Scholarship in 2017.

On being selected for the inaugural scholarship, Compton said, “It’s definitely an honor. It makes me feel special, but at the same time gives me motivation to go down the road in life and ultimately help other kids get to the same spot.”

Compton originally wanted to be a farrier and planned to attend farrier school. However, at Locust Trace he learned about the Legacy Equine Foundation and met Mack, who encouraged him to pursue an equine degree at UK and make his mark on the equine industry when he graduates.

Compton is excited about that prospect and would ultimately like to become a horse farm manager or work in a similar role where he can impact a farm’s business side.

In the meantime, he’s teaming up with Mack to speak in classes to other youth interested in becoming part of the equine industry.

“We are thrilled for UK Ag Equine Programs to be involved in the first Legacy Equine Scholarship with a



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Dion Compton hopes to become a horse farm manager or work in a similar role where he can impact a farm’s business side.

great new freshman student,” said Nancy Cox, PhD, dean of UK’s College of Agriculture, Food and Environment. “Thanks to the Legacy Equine Foundation for the confidence they are placing in our program, and thanks to Dion for signing on for a great education.”

Created in 2016 by Mack, the Legacy Equine Foundation partners with Fayette County Public Schools to sponsor the Legacy Equine Academy.

“Students with an interest in equine-related studies are intentionally

recruited and tagged as legacy leaders starting in middle school,” Mack said. “With this scholarship ceremony, we are accomplishing our goal of bridging the historical contributions of African-American trailblazers in horse racing history to the modern traditions and future opportunities in the equine industry.”

The Legacy Ball was held for the first time in 2017 and will be an annual event. Mack said the ball benefits Lexington and the surrounding community through an equine scholarship outreach program targeting African-American rising high school seniors interested in pursuing the equine industry as a career. He developed the program to promote and improve self-esteem by empowering local youth with knowledge of their heritage, which is key in developing community leadership.

“Dion is a wonderful representative of what we hope for in our students in the Ag Equine Programs; his enthusiasm and his passion will take him far, both at UK and as a part of the equine industry,” said Mick Peterson, PhD, director of UK Ag Equine Programs. “He is a perfect fit for the first year of the Legacy Equine Scholarship, which reflects the rich history of horse racing.” **UK**

>Holly Wiemers, MA, APR, is the communications director for UK Ag Equine Programs.

Registration Open for Online Horse Behavior, Safety Course

This October, keen horse enthusiasts aged 14 to 17 will have an opportunity to join their own special community to learn the language of horses during Equine Guelph’s popular Horse Behavior and Safety online course, taking place Oct. 2-22.

The adult offering, also available in October, has brought together horse enthusiasts from across Canada and the globe in past offerings.

Saddle Up Safely (SUS),



ISTOCK.COM

Equine enthusiasts that are members of Saddle Up Safely’s partner organizations can learn the language of horses at a discounted rate.

a UK program, and Equine Guelph have announced a partnership to provide SUS’s partner organization members with a 10% discount. Saddle Up Safely is partnered

with equine and safety organizations throughout the United States, and members of these partner organizations can claim their discount by registering for adult or

youth versions of the online course at TheHorsePortal.com/SUS and using coupon code **sus2017hbs**. Find a complete list of partner organizations at ukhealthcare.uky.edu/community/programs/SUS/partners.

“Through learning how horses perceive the world around them, their human handlers can develop safe best practices for working with them,” said Gayle Eckler, PhD, director of Equine Guelph. “A hefty percentage of horse-related injuries are due to human error and could be prevented if the handler had basic education in safety.” **UK**

>Information provided by Jackie Bellamy-Zions of Equine Guelph.

GRAD STUDENT SPOTLIGHT



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ASHLEY STEUER, DVM

From: Kalamazoo, Michigan

Degrees and institutions where received:

Michigan State University Lyman Briggs College, BS, Animal Science with a minor in Spanish
University of Tennessee College of Veterinary Medicine, DVM

Ashley Steuer's path to UK wasn't necessarily the most straightforward one. Back in 2012, she wanted to pursue equine and large animal practice (mainly dairy) after completing veterinary school. However, that plan shifted once she discovered parasitology.

"My passion for it began in my first-year parasitology class, taught by Dr. (Sharon) Patton and Dr. (Richard) Gerhold," Steuer said. "I was immediately hooked."

To pursue her new dream of becoming a veterinary parasitologist in an academic setting, Steuer knew she'd need to both obtain a PhD and a complete a residency. She began researching options, and during her clinical year, she used her externships to visit Oklahoma State University, in Stillwater, and East Tennessee Clinical Research, Inc. (ETCR), in Knoxville.

"It was at these two locations where it became evident that there is a need for large animal and equine-focused veterinary parasitologists and that Dr. Martin Nielsen (DVM, PhD, Dipl. ACVM, EVPC) would be the person to contact and may be looking for another graduate student," Steuer said. "Nielsen and I met while I was on externship at ETCR, and the rest is history."

Steuer is now a graduate student in the UK veterinary science department under Nielsen's direction, as well as the Zoetis resident in veterinary parasitology through the National Center for Veterinary Parasitology, which developed and started the residency program. The program focuses on fulfilling the resident's PhD requirements and research. However, additional program requirements include training in both teaching and clinical veterinary parasitology diagnostics. The curriculum is set up to prepare individuals for not only the American College of Veterinary Microbiologist parasitology board examination but also for a career in veterinary parasitology. Residents are selected based on a good foundation in their undergraduate or graduate studies, their veterinary school performance,

letters of recommendation, and, most importantly, a PhD program that meets the criteria for giving a well-rounded experience in research, teaching, and diagnostics.

Steuer is conducting *in vitro* (in the laboratory) research on cultivating certain equine parasites. Currently, she and colleagues are developing a culture system for cyathostomins (a ubiquitous parasite of horses, also known as small strongyles). These parasites are the most targeted via deworming programs in adult horses in the United States, and they can cause a rare, but severe, clinical disease called larval cyathostomiasis. While these parasites have been cultured with some success before, Steuer and the parasitology team are hoping to develop a culturing technique that can be used for different stages of the parasite.

"This *in vitro* culture system could have several implications for use in research including, but not limited to, studying drug resistance, transcriptomics/genomics of these parasites, testing of novel anthelmintics, and to help further our understanding of the horse parasite interaction," Steuer said.

The other parasite Steuer is attempting to culture the larval (immature stages) stages of *is Parascaris* spp, a pervasive parasite mostly affecting foals.

"In rare cases, it can cause verminous impaction and lead to death," she said. "Another graduate student in our lab, Jessica Scare, is working on culturing the adults *in vitro*."

When asked what her most valuable takeaway from the program was, Steuer said, "While there is a lot that we know, there is so much left to learn and so much research we may have lost."

"We are currently just scratching the surface for research in parasitology and need to continue to push the boundaries of what we know into what we don't know and continue to look retrospectively to not lose what we've learned."

Steuer plans to graduate in 2020-21 and looks forward to sitting for the American College of Veterinary Microbiologists board examination and then potentially pursuing a career in academia. **UK**

>Alexandra Harper, MBA, is the operations and communications coordinator for the UK Ag Equine Programs.



JIMMY HENNING

Proper round bale storage, handling, and feeding can help minimize the risk of horses contracting botulism.

Selecting Hay for Your Horse: Separating Fact From Fiction

Horse people are often described as picky, fussy, or difficult when it comes to hay selection. This is not surprising since most horses are either very valuable or viewed as part of the family.

But it's often a lack of knowledge about selecting quality hay that gives horse owners a bad name and forces them to pay more for hay than their neighbors with other types of livestock. Myths develop because of a piece of truth that becomes inflated and held as absolute truth without justification. To improve our knowledge of hay

Hay Selection Myths

transportation costs. Be sure to address any concerns about a specific grass or legume species, such as endophyte-infected tall fescue for broodmares, with your hay producer. If you are concerned about feeding a certain species of hay, consult your local county extension agent or equine nutritionist.

MYTH: Round bales and/or silage contain diseases, such as botulism, and should not be fed to horses.

HOW IT CAME ABOUT: Botulism's causative bacterium prefers moist conditions and is commonly found in the soil, stream sediments, and intestinal tracts of fish and mammals. Silage (fed more commonly outside the United States) is stored with higher moisture than hay and, when not properly handled, can allow bacteria to flourish. Round bales are often baled at a similar moisture content as small square bales, but are more likely to be stored outside without cover from rain. This wet environment encourages bacteria growth.

TRUTH: Proper round bale storage, handling, and feeding will minimize the risk of botulism infection in horses. Round bales should be covered when stored and fed using a hay feeder to reduce contamination from weather, trampling, and urination. Do not feed round bales that show clear signs of mold to horses. Silage should be put up at the proper moisture content for the style of storage, kept airtight until feeding, and fed quickly to reduce botulism risk. Always test silage quality before feeding. Finally, discuss a botulism vaccine with your veterinarian if your horse resides in a botulism-prone area.

MYTH: Don't feed hay that has been rained on.

HOW IT CAME ABOUT: Rain negatively affects hay in a variety of ways:

- Rain on recently cut hay can prolong plant respiration and reduce energy content;
- Rain on legumes will cause leaves to separate from the stems (called leaf shatter) and, therefore, remove the more nutritious portion of the plant. This means the final product will contain more fibrous stems, which



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Store hay for six to eight weeks before testing its quality—this will provide the most accurate results.

reduces the quality;

- Rain causes sugar and other carbohydrates, proteins, and minerals to leach from hay; and
- Heavy rain can splash soil up onto curing hay, which can increase dustiness and rapidity of molding.

TRUTH: Rained-on hay can be acceptable quality. While rain usually negatively affects hay, to what degree depends on several factors, including what type of hay is being harvested, how much rain fell and how intensely, the curing stage when it rained, and how the producer counteracts these negative effects. For example, if rain occurs within a day of cutting, it has very little effect on hay quality. All hay, especially material that has been rained on, should be tested for quality and inspected for mold or dust before use.

MYTH: Hay should be stored for six weeks before feeding.

HOW IT CAME ABOUT: This myth likely came about from hay testing. Hay continues to cure for six to eight weeks after being stored. This means the quality of the hay can change slightly over time before it becomes stable.

TRUTH: Hay can be fed at any time after harvesting. However, it should not be tested until it has been stored for six to eight weeks—this will provide the most accurate results. While feeding hay sooner will not be harmful to horses, it can be difficult to balance the ration because the hay quality is unknown.

MYTH: Green is good; brown is bad.

HOW IT CAME ABOUT: Often, hay harvested too late or mishandled will lose its green color due to processes

such as heating and bleaching. Green hay is less likely to have gone through these processes and, thus, more likely to be better-quality.

TRUTH: A hay test is the only way to truly evaluate quality. No quality factors directly affect color or vice versa. Therefore, color is an inconsistent means by which to evaluate hay quality.

MYTH: Feeding hay causes a large distended digestive tract, known as a hay belly.

HOW IT CAME ABOUT:

A hay belly usually results when malnourished horses receive large quantities of low-quality, high-fiber hay. These horses are usually thin over the neck, withers, ribs, and hindquarters, while the belly appears large.

TRUTH: A balanced ration that includes quality pasture or hay will maintain a horse at an ideal condition without excessive gut fill.

Take-Home Message

Horses evolved consuming forage, and, whether in the form of pasture or hay, it remains an important component of the equine diet. The ideal hay for your horse will depend on his current condition, work level, pasture availability, and the management logistics on your farm. Always inspect hay to ensure it's free from contaminants such as weeds, insects, mold, dust, and other foreign material. Also, evaluate hay's nutritional value prior to feeding so you can formulate and balance a ration to meet your horse's particular needs.

For more information, see the following UK publications at www.uky.edu/ag/forage/horselinks:

- *Botulism: A Deadly Disease that can Affect Your Horse*
- *Choosing Hay for Horses*
- *Minimizing Losses in Hay Storage and Feeding*
- *Understanding Forage Quality UK*

Krista Lea, MS, UK Horse Pasture Evaluation coordinator; Ray Smith, PhD, forage extension specialist; Tom Keene, MS, hay marketing specialist; Chris Teutsch, PhD, forage extension specialist; and Jimmy Henning, PhD, provided this information.

UK Gluck Center Welcomes Dr. Carrie Shaffer

The UK Gluck Equine Research Center, in Lexington, recently welcomed Carrie Shaffer, PhD, as an assistant professor of microbiology.

Shaffer completed her undergraduate degree at UK, graduating with a bachelor's of science in agriculture biotechnology, and earned her PhD from Vanderbilt University, in Nashville, Tennessee, in microbiology and immunology. She performed postdoctoral research at Vanderbilt University Medical Center and completed her postdoctoral training at the California Institute of Technology, in Pasadena.

Shaffer said she'd wanted to return to her home state since completing her undergraduate degree at UK. She said she wanted to come to the Gluck Center,

specifically, to expand her research program to include equine infectious disease in addition to human medicine.

"I really love the facilities, the people in the department, and the diversity of research," she said.

Shaffer also has a joint appointment with the UK College of Medicine's Department of Microbiology, Immunology, and Molecular Genetics and is performing research on bacteria that affect both horses and humans.

With her research involving horses, she is undertaking a *Rhodococcus equi* project. She will be studying bacterial factors that affect colonization

in the horse and trying to identify new bacterial genes that can be targeted for drug and vaccine development to prevent *Rhodococcus* pneumonia in foals.

This research is important to the

equine industry because of economic costs associated with treating and preventing bacterial infections in horses. Shaffer hopes to develop better diagnostic and prevention methods so owners and veterinarians do not have to treat horses with unnecessary doses of antibiotics.

In her human research, Shaffer is studying bacteria that cause gastric cancer. Specifically, she is examining bacterial type IV secretion systems, which are molecular "machines" that bacteria use to inject different molecules into host cells. The transferred molecules allow the bacteria to colonize specific tissues and cause disease. She is studying how the bacteria build these machines and engineer them to transfer DNA, protein, or other molecules to the host cell.

Shaffer is also guest lecturing in some agriculture biotechnology classes this fall. Additionally, she serves on graduate student committees in the Department of Medicine and is a member of the Gluck Center's hospitality committee. [UK](#)

>Katie Lampert is the marketing and communications intern at the UK Gluck Equine Research Center.



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Food and Environment

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UK Gluck Center to host USDA-NIFA Symposium: Equine Arteritis Virus Research Outcomes

The UK Gluck Equine Research Center will host a symposium recapping the fifth and final year of a USDA-NIFA-AFRI (National Institute of Food and Agriculture Agriculture and Food Research Initiative) grant awarded in 2012. The symposium on the grant, titled, "Identification of genetic factors responsible for establishment of equine arteritis virus carrier state in stallions," will take place Nov. 10 at the Griffin Gate Marriott in Lexington, Kentucky.

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¹ Cortese V, Hankins K, Holland R, Syvrud K. Serologic responses of West Nile virus seronegative mature horses to West Nile virus vaccines. *J Equine Vet Sci.* 2013;33:1101-1105.
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EAV Symposium

To register for the symposium, visit <https://2017eavsymposium.eventbrite.com>. Contact Jenny Evans at jenny.evans@uky.edu or 859/218-1089 with questions. **UK**

>Jenny Evans, MFA, is the senior veterinary science marketing and promotion specialist at the UK Gluck Equine Research Center.

Book Proceeds to Help Fund EPM Research at Gluck Center

Kristen Halverson's children's book, *The Tale of Josephine Rose: A Horse's Magical Neigh*, was published in February 2016 by Dog Ear Publishing. Halverson donated \$956 of her proceeds from the publication to the equine protozoal myeloencephalitis (EPM) research program run by Dan Howe, PhD, professor at UK's Gluck Equine Research Center.

Now, she hopes a second book in the series will help raise additional funds for EPM research, as well as raising awareness about the disease itself, caused by a parasitic infection in the horse's central nervous system.

While attending events last year, Halverson said she got mixed feedback about EPM.

"I've encountered a lot of people that did not understand the disease and equine owners that had never heard of it," Halverson said.

She said she decided to continue to give back to the Gluck Center because she strongly values its mission of improving horse health and well-being. She said she hopes to raise \$2,500 from proceeds of *The Tale of Noel: The Holiday Horse Angel*.

"It is my hope that my mission will create enough awareness in the long run that UK animal science alumni, equine veterinarians, and leading equine philanthropists around the country will begin to give back to EPM research at the Gluck Center so that all equines can receive the best treatment protocols and protection from EPM," Halverson said.

30th Anniversary Celebration
UNIVERSITY OF KENTUCKY Gluck Equine Research Center

October 12, 2017
Woodford Reserve Room
Kroger Field
(formerly Commonwealth Stadium)

Hosted by
Dr. Stuart Brown,
Chair of the Gluck
Equine Research Foundation

Cocktails and Hors d'oeuvres, 6 p.m.
Program and Dinner, 7 p.m.

Honoring Dr. Peter J. Timoney
and his lifelong contributions
to equine infectious disease research.

For tickets and more information, visit www.ukalumni.net/gluck

UK College of Agriculture,
Food and Environment

- 7:30 – 8:00 a.m. Registration and Coffee**
Gluck Equine Research Center Lobby
- Seminars**
Auditorium, Gluck Equine Research Center
- 8:00 – 8:15 Welcome**
David Horohov, PhD
- 8:15 – 9:00 Reproductive Health Research Overview**
Barry Ball, DVM, PhD, Dipl. ACT
- 9:00 – 9:45 Parasitology Research Overview**
Martin Nielsen, DVM, PhD, Dipl. EVPC, ACVM
- 9:45 – 10:00 Refreshment Break**
Lobby, Gluck Equine Research Center
- 10:00 – 10:45 Infectious Diseases Research Overview**
Peter Timoney, MVB, PhD, FRCVS
- 10:45 – 11:45 Inaugural Teri Lear Memorial Lecture**
"The science and art of animal cytogenetics"
Terje Raudsepp, MSc, PhD, Texas A&M Department
of Veterinary Integrative Biosciences
- 11:45 – 12:30 Lunch**
Lobby/Auditorium, Gluck Equine Research Center
- 12:30 – 2:30 p.m. Laboratory Open House**
Gluck Equine Research Center

This is a free event, but registration is required at www.ukalumni.net/gluck.

EPM Research

Howe said he appreciates Halverson's philanthropic efforts.

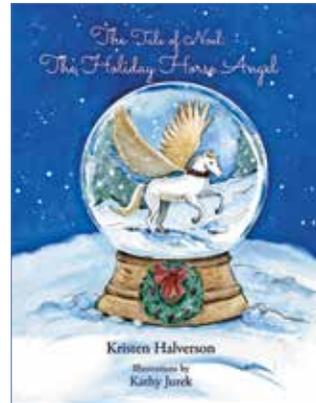
"I am very grateful to Kristen for her interest and willingness to support my research program," he said. "Indeed, it has been the benevolence of people like Kristen that has helped to make the Gluck Equine Research Center successful. Kristen's gesture is especially gratifying because of the connection to horse-themed children's books that deliver very positive messages."

Halverson said she decided to write *The Tale of Noel: The Holiday Horse Angel* because she enjoys the writing process as a creative outlet. She said she leverages her creative writing skills as a communication vehicle to further her EPM awareness mission, enhance EPM research funds, and honor her late Thoroughbred, Nino Tempo, who was

diagnosed with EPM in 2010. She used her Clydesdale and Morgan horses as inspiration for the story, which explores hope, kindness, and thoughtfulness.

In *The Tale of Noel: The Holiday Horse Angel*, Clydesdale Josephine Rose (who also stars in *The Tale of Josephine Rose: A Horse's Magical Neigh*), a former carriage and sleigh horse, is now settled into an Iowa farm with her new friends. However, she misses her hitch partner from Canada, a Morgan horse. She searches the night sky for a falling star so she can make her Christmas wish. She loses hope until she meets an enchanting horse angel named Noel in a blizzard.

Halverson's first-edition paperback



book can be purchased at CreateSpace.com and Amazon.com; she said purchases from the CreateSpace e-store will enabled her to give more in donations. The second-edition hardcover book will be available online from Amazon.com and Barnes & Noble by October.

Halverson plans to write one more book in this series.

Find more information about Halverson and her books at Facebook.com/theholidayhorseangel, Twitter.com/authorkristenh1, and KristenHalverson.com. **UK**

>Katie Lampert is a marketing and communications intern at the UK Gluck Equine Research Center.

Tom Riddle, DVM, Named 2017 Friend of UK Ag Equine Programs

Breakthrough research and one-of-kind educational opportunities don't happen by accident or in isolation. They are accomplished in concert with industry stalwarts who give of their time, talents, and wisdom. One such linchpin, Lexington, Kentucky-based veterinarian Tom Riddle, DVM, was recently named the 2017 Friend of UK Ag Equine Programs. The award recognizes the many impacts he has had on equine research and education within UK's College of Agriculture, Food and Environment.

Riddle, who co-founded Rood & Riddle Equine Hospital in 1986 and specializes in reproductive veterinary medicine, has actively served for decades in many



Dr. Tom Riddle

advisory capacities for UK's equine research and education.

Laurie Lawrence, PhD, professor and researcher within the college's animal and food sciences department, nominated Riddle for the honor, in conjunction with David Horohov, PhD, chair of the Department of Veterinary Science and director of the Gluck Equine Research Center;

Jamie MacLeod, VMD, PhD, John S. and Elizabeth A. Knight chair and professor of veterinary science at the Gluck Equine Research Center; and Jill Stowe, PhD, agricultural economics associate professor.

In her nomination letter, Lawrence wrote, "As an internationally known authority on equine reproductive medicine, Dr. Riddle has had many collaborative projects with scientists at UK and has often served as a liaison between researchers, practitioners, and farm managers. Dr. Riddle was one of the first clinicians to recognize the reproductive firestorm that was eventually known as mare reproductive loss syndrome (MRLS). Working with UK scientists and other Central Kentucky veterinarians, Dr. Riddle was intimately involved in the investigations that connected MRLS to the Eastern tent caterpillar."

According to the nomination, Riddle has ensured that his practice is accessible and supportive of

UK's teaching, outreach, and research missions. He generously supplies speakers for undergraduate courses and outreach activities and has served as a sponsor for conferences and events organized by UK. Additionally, the hospital accommodates many interns each semester; provides essential experience for pre-veterinary students, and hosts educational tours and demonstrations at its facility.

Rood & Riddle provides annual support for an equine scholarship and for equine clubs and team activities, and Riddle was a major advocate of and contributor to the renovation of UK's equine reproductive research facilities. Additionally, he has served on the college's equine advisory committee from the very start.

Known for being humble and quick to give others credit, Riddle's response to being recognized with this award was characteristic.

"I am very grateful for the invaluable help that UK Ag

Tom Riddle, DVM

Equine Programs has provided to me personally, to my veterinary practice, and to Kentucky's horse industry," Riddle said. "Whenever large populations of human beings and animals congregate, there will be medical challenges. When Kentucky has had these challenges, veterinarians and horsemen have always known that they could call on our university for help. For example, the university's prompt epidemiological study of MRLS helped to save many future foals and, in my opinion, helped to save Kentucky's breeding industry."

Nancy Cox, PhD, dean of the college, said, "Tom is a tireless advisor and sounding board who has served every aspect of our college's equine programs. We have benefited variously from his wide knowledge of equine reproduction, his excellence in problem-solving, and his gentlemanly demeanor that infuses all he does."

"Tom is a tireless advisor ... who has served every aspect of our college's equine programs."

NANCY COX, PHD

These sentiments were reflected many times over from those who nominated him for the award.

"Dr. Riddle has a keen interest in research and is very much a proponent of evidence-based medicine," Horohov said. "Dr. Riddle is an important leader in equine veterinary medicine at both the national and international levels. His association with our programs adds to our stature as a leading equine educational and research program."



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Nancy Cox, PhD, and Mick Peterson, PhD, present the Friends of UK Ag Equine Programs honor to Dr. Tom Riddle.

Mick Peterson, PhD, director of UK Ag Equine Programs, added, "It is humbling to look at Dr. Riddle's international contributions during his career. However, with everything he has done, he has consistently contributed to the success of the UK Ag Equine Programs. It is hard to imagine someone more worthy of this recognition."

The Friend of UK Ag Equine Programs was created in 2005 to recognize a member of the public who had provided advocacy, funding, or other extraordinary support or a college or university employee who had generated an exceptional relationship with stakeholders that manifested into a new program, new advocacy success, or new resources for the program.

Past Friends of UK Ag Equine Programs include Matt Koch, of Shawhan

Place Farm; Bennie and Cheryllee Sargent, of Sargent Quarter Horses and coach of the UK Equestrian Team, western division; Stuart Brown, DVM, a Lexington-based veterinarian specializing in equine reproduction with Hagyard Equine Medical Institute; Norm Luba, executive director of the North American Equine Ranching Information Council and current chair of the UK College of Agriculture, Food and Environment's Equine Advisory Committee; Dan Rosenberg of Rosenberg Thoroughbred Consulting; Northern Kentucky county extension agent trio Don Sorrell of Campbell County, Dan Allen of Kenton County, and Jerry Brown of Boone County; and David Switzer, former executive director of Kentucky Thoroughbred Association/Kentucky Owners and Breeders Association.

For more information about UK's Ag Equine Programs, visit www.ca.uky.edu/equine. **UK**

>Holly Wiemers, MA, APR, is the communications director for UK Ag Equine Programs.

Upcoming Events

Oct. 12, 7:30 a.m.-2:30 p.m.

Gluck Equine Research Center
 30th Anniversary Seminar
 Gluck Equine Research Center,
 Lexington, Kentucky
 The seminar is free to attend,
 but registration is required at
ukalumni.net/gluck.

Oct. 12, 6 p.m.

Gluck Equine Research Center
 30th Anniversary Celebration
 Woodford Reserve Room at
 Kroger Field, Lexington, Ken-
 tucky
 Register at ukalumni.net/gluck.

Oct. 26, 4-5 p.m.

UK Department of Veterinary
 Science Equine Diagnostic
 Research Seminar Series
 Topic: Equine Recurrent Uveitis
 Speaker: David Wilkie, DVM, MS,
 Dipl. ACVO, The Ohio State
 University
 Location: UKVDL, Lexington,
 Kentucky

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Bluegrass Equine Digest at 100

We've done a lot in 100 issues. Following is a small sample of the important and still-relevant stories that have appeared in the *Bluegrass Equine Digest*.

Aged Horses

- Equine Influenza Vaccine Efficacy in Older Horses, TheHorse.com/25690
- The Older Horse: An Immunological Perspective, TheHorse.com/28940
- Tips for Preparing Your Older Horse for Winter, TheHorse.com/34746
- How Immunosenescence Impacts Senior Horse Care, TheHorse.com/38713

Biosecurity

- Safeguards for International Horse Movement, TheHorse.com/26030
- Biosecurity for Horse Farms: Stall Disinfection and Other Management Techniques, TheHorse.com/25540
- Practical Biosecurity for Horse Farms, TheHorse.com/29280
- Handling Disease Outbreaks, TheHorse.com/32417
- Biosecurity and Hygiene, TheHorse.com/39113

Diagnostics and Tools

- New ELISA Test for EPM Diagnosis Developed at the Gluck Center, TheHorse.com/25876
- New Antibiotic Susceptibility Method Available Through UKVDL, TheHorse.com/27406

- New PCR Assay Reduces EHV-1 Testing Costs, TheHorse.com/28270
- Gluck Center Develops New PCR EHV-1 Assay, TheHorse.com/29467
- ELISA Test for EPM, TheHorse.com/25876
- The Equine Necropsy: A Sensitive but Important Topic, TheHorse.com/34927
- Necropsies Teaching About Catastrophic Racehorse Injuries, TheHorse.com/38356
- Syndromic Surveillance and Spatial Epidemiology, TheHorse.com/37360

Economics

- Conceptualizing the Kentucky Horse Industry as an Economic Cluster, TheHorse.com/24331
- Online Budget Tools for Horse Owners Offered by UK College of Agriculture, TheHorse.com/26557
- Thoroughbreds: Freshman Sire Stud Fees, TheHorse.com/26302
- Leading Sire Stud Fees: Breeding to Sell, TheHorse.com/27940
- Kentucky Equine Survey Launches, TheHorse.com/28289
- Feed Choices Can Mean Cost Savings for Horse Owners, TheHorse.com/32079



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- Study Shows Kentucky's Equine Industry has \$3 Billion Economic Impact, TheHorse.com/32511
- Kentucky Equine Market Continues to Show Improvement, TheHorse.com/35607
- Ready to Run: 2-Year-Old in Training Breeze Times, Sale Prices, and Racetrack Performance, TheHorse.com/37296

Environmental

- Water Quality Testing, TheHorse.com/26316
- UK to Investigate Environmental Impact of Equine Carcass Disposal, TheHorse.com/23618
- Invasive Plant Species' Abundance Similar at Native and Introduced Sites, TheHorse.com/27116
- Climate Change's Effects on Kentucky Horse Pastures, TheHorse.com/27679
- Environmental Best Practices for Horse Owners, TheHorse.com/29296
- Tips for Environmentally Friendly Muck Storage, TheHorse.com/29916
- Composting Horse Carcasses, TheHorse.com/30846

Equine Disease

- Equine Herpesvirus Research Ongoing at the UK Gluck Center, TheHorse.com/27396
- UKVDL Nocardioform Placentitis Study, TheHorse.com/27975
- UKVDL Records Rise in Equine Leptospirosis Cases, TheHorse.com/28392



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- Advances in Equine Neurological Diseases Symposium a Success, TheHorse.com/28395
- Nocardioform Placentitis Affecting Kentucky's 2011 Foal Crop, TheHorse.com/28533
- Understanding Potomac Horse Fever, TheHorse.com/28514
- Equine Emerging and Surging Diseases: What's on the Horizon, TheHorse.com/29420:
- UK Researchers Study Age-Related Susceptibility to *R. Equi*, TheHorse.com/33398
- Commentary: 'One Health' Helps Safeguard Horses' Health, TheHorse.com/33193
- Commentary: Don't Ignore Exotic Diseases, TheHorse.com/34716
- Emerging Equine Diseases: What You Should Know, TheHorse.com/35518
- Watch for Potomac Horse Fever, TheHorse.com/36144
- Wobbler Syndrome: What We Know and Where We're Headed, TheHorse.com/36020

Genetics and Genomics

- Studies of Hereditary Traits in Horses Using New Tools, TheHorse.com/23960
- Horse Genome Publication Concludes Kentucky Project, TheHorse.com/24530
- Animal Genetics Testing Lab Celebrates 25th Anniversary, TheHorse.com/26774
- Annotating the Equine Genome, TheHorse.com/39919
- Genomics' Contribution to EVA Research and Beyond, TheHorse.com/34748
- Pandora's Box: Equine Genomics, TheHorse.com/38273
- Advancements in Understanding Genomics and Horses, TheHorse.com/38276

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- UK College of Agriculture: Time to Inventory, Purchase Hay, TheHorse.com/26407
- Relative Feed Value of Hay, TheHorse.com/28389
- It's Haymaking Season, TheHorse.com/33906
- Selecting Horse Hay: Separating Fact From Fiction, TheHorse.com/34737



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- Blister Beetles and Alfalfa: A Potentially Lethal Mix, TheHorse.com/36932
- Timely Topic: A Connection Between Moldy Hay and Heaves, TheHorse.com/36464
- Q&A: Preventing Hay Fires, TheHorse.com/36467
- Understanding Round vs. Square Bale Hay for Horses: Part 1, TheHorse.com/36871
- Understanding Round vs. Square Bale Hay for Horses: Part 2, TheHorse.com/37044

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- Botulism: A Deadly Disease, TheHorse.com/23652
- Arctic Cold Dangerous for Livestock, TheHorse.com/26511
- Use Caution When Bedding Horses on Fescue, TheHorse.com/25691
- Managing Mud on Kentucky Horse Farms, TheHorse.com/26952
- Best Management Practices for Environmental Systems, TheHorse.com/27402
- Post-Rain Tips for Horse Owners, TheHorse.com/27535
- Planning for Winter on Kentucky Horse Farms, TheHorse.com/28141
- Preparing Horse Farms for Winter Weather Disasters, TheHorse.com/28507
- Hot, Dry Weather Requires Revised Management Strategies for Horses, TheHorse.com/29370
- Creating Hardened Surfaces in High-Traffic Areas, TheHorse.com/29345
- Windrow Composting for Parasite Control and Waste Management, TheHorse.com/29924
- Using Mature Hay for Bedding: Potential for Tall Fescue Toxicity, TheHorse.com/31248
- Pervious Concrete Reduces Injury, Environmental Risks, TheHorse.com/31576
- To Soak or Not to Soak Hay? TheHorse.com/33415

- How Many Horses Can Your Farm Hold? TheHorse.com/33905
- Fencing: Is there a Best Choice? TheHorse.com/29763
- Using Electric Fence to Improve Pasture, TheHorse.com/35526
- Water Hardness Worries, TheHorse.com/35553
- Use Caution When Bedding Horses on Rye Straw, TheHorse.com/37735
- Slobbers in Horses, TheHorse.com/36140
- Customized Daily Weather Information for Kentucky Farms, TheHorse.com/25838

Immunology

- Exercise-Induced Inflammation and Injury in Racehorses, TheHorse.com/29006
- NSAIDs Might Impair Horses' Immune Response to Influenza Vaccines, TheHorse.com/33253
- Does Equine PPID Affect Immune Responses to Vaccination? TheHorse.com/35920

Insects and Pests

- Summer Insects: Flies, Ticks, Wasps, and Bees, TheHorse.com/27513
- Dealing with Ticks, TheHorse.com/27204
- Is My Horse a Tick Magnet? TheHorse.com/32774

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- Joint Disease and Cartilage Repair in Horses, TheHorse.com/29159
- Accelerating Medical Progress on Equine Lameness, TheHorse.com/38663

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- Feeding Broodmares in Fall and Winter, TheHorse.com/26055
- Broodmares' Nutritional Needs During Late Gestation, TheHorse.com/28598
- Fluoridated Water and Horses, TheHorse.com/39869

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- Is Your Horse Too Fat? There's an App for That, TheHorse.com/32429
- Broodmare Nutrition: Preparing for Fall and Winter, TheHorse.com/28101
- Nutrition's Role in Enhancing Aging Horses' Immunity, TheHorse.com/32660
- Nutrient Digestibility in Healthy Adult and Senior Horses, TheHorse.com/35273
- Why Do Horses Need Amino Acids in Their Diets? TheHorse.com/35353
- New Perspectives on Foal Nutrition, TheHorse.com/38969
- How Sweet is Your Sweet Feed? TheHorse.com/36599
- Phosphorus in My Horse's Diet: What is it Good For? TheHorse.com/37040

Other Interesting Research Topics

- UK Professor Melds Apparel, Horses in Student and Academic Research Projects, TheHorse.com/25877
- UK Farm a Site for Student Learning, TheHorse.com/25241
- UK Features Projects on African-Americans in Kentucky's Equine History, TheHorse.com/26156
- Kentucky Equine Networking Association Hosts Inaugural Meeting, TheHorse.com/26159
- Horses as Healers in College Hippotherapy Course, TheHorse.com/26264
- Comprehensive Planning for Equine Organizations, TheHorse.com/27104
- Soil Scientist Works to Preserve Early Equine History, TheHorse.com/27911
- Aging Farmers' Health and Safety, TheHorse.com/28271
- Cloning and Embryo Transfer Legal Issues, TheHorse.com/29162
- Preserving Rural Landscapes, TheHorse.com/32191
- UKAg Using Horses to Teach Emotional Intelligence, TheHorse.com/33416
- Cobalt Use in Racehorses, TheHorse.com/35452
- Thoroughbred Worker Health and Safety Study Results in Free Bilingual Safety Materials, TheHorse.com/38718



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- Disease Mapping Initiative Helping to Navigate Outbreaks, TheHorse.com/38857
- Female Equestrians Needed for Study on Breast Biomechanics and Health Outcomes, TheHorse.com/38846
- Two-Year Frangible Pin Study Continues, TheHorse.com/38721
- Rider Safety Program Releases New Booklet on Safe Return to Riding, TheHorse.com/36605

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- Strongyle Egg Counts and Race Performance, TheHorse.com/28073
- Deworming: Less is More, TheHorse.com/33632
- Crowdfunding Project Receives Recognition, TheHorse.com/33913
- Deworming Dilemma, TheHorse.com/26798
- Integrated Parasite Control: How to Strike a Balance, TheHorse.com/35391
- Do Foals and Yearlings Need Fecal Egg Counts of Zero? TheHorse.com/37791
- How Scientists Count Equine Parasites with a Cell Phone, TheHorse.com/37376

Pasture Management and Weeds

- Managing Pastures to Avoid Tall Fescue Toxicity, TheHorse.com/25090
- Fall Pasture Improvements, TheHorse.com/26261
- Weed of the Month: Curly Dock, TheHorse.com/26273
- Tips for Overseeding Central Kentucky Horse Pastures, TheHorse.com/27812
- Weed of the Month: Broadleaf

- Plantain, TheHorse.com/26398
- Rotational Grazing: Time it Right for Optimal Pastures, TheHorse.com/29524
- Poison Hemlock, TheHorse.com/23755
- Weed Management Plans for Horse Pastures, TheHorse.com/32604
- Spring Pasture Management Do's and Don'ts, TheHorse.com/33604
- Weed of the Month: Buttercups, TheHorse.com/25581
- Weed of the Month: Nimbwill, TheHorse.com/25235
- Equipment for Managing Horse Pastures, TheHorse.com/34925
- An Equine New Year's Resolution: Better Pasture Management, TheHorse.com/35210

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- Diagnosing Disorders of Sexual Development in Horses: Male or Female? TheHorse.com/26278
- Fertilization and Early Pregnancy Loss in Mares, TheHorse.com/29031
- Placentitis and Foals' Athletic Prognosis, TheHorse.com/30874
- Health Problems in Newborn Foals, TheHorse.com/33659
- Advancements in Equine Repro Research, TheHorse.com/35352
- Understanding Foal Immunity *In Utero* and Beyond, TheHorse.com/38815
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- A Review of the Many Faces of Placentitis, TheHorse.com/37103

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- Poisoning in Horses: Common Toxic Substances, TheHorse.com/22056
- Toxic Mushroom Risk for Horses in Kentucky Pastures Due to Wet Weather, TheHorse.com/23922
- Toxin Topic: Red Maple Toxicosis, TheHorse.com/25736
- Toxin Topic: Johnsongrass Poisoning in Horses, TheHorse.com/26443
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