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# BEHIND THE SCENES AT THE NYS VETERINARY DIAGNOSTIC LAB

On a day-to-day basis, horse owners in New York may not feel very connected to the NYS Veterinary Diagnostic Laboratory, but they are there for us when needed! I serve as a representative of the equine industry on the Advisory Board for the NYS VDL and we recently met in Ithaca for an update on lab operations and their strategic plan for the next several years. This small, diverse committee was formed in 2014, but not activated until 2024 when Governor Hochul's State of the State charged various groups to increase collaboration to prioritize the overall health of NY's residents, human and animal.

While a Department of Agriculture and Markets law is the formality by which the lab exists and operates, it is the mission of the lab which is the driving force. The strategic plan is an interconnected four-part initiative to maintain and advance the mission of providing veterinary diagnostic services and remain on the forefront of emerging threats to animal health. Strong partnerships, service excellence, top-tier technology, and workplace stewardship are the pillars this cohesive

and passionate group of approximately 270 employees base their daily efforts upon.

Developing new technology has been part of the lab since its inception. Dr. Leroy Coggins for example, was responsible for the test we all use that's part of our regular language now! Prior to this 1973 test for Equine Infectious Anemia, horses became sick and spread the disease widely. As part of our annual spring checkups, the Coggins Test allows us to isolate carriers before they can infect whole populations and has greatly reduced the threat of EIA. Today, the lab continues to develop more efficient ways to test for a variety of equine diseases; for example, they've added multiplex tests which can rapidly diagnose diseases that sometimes the practitioner didn't even consider. By combining tests for EEE and WNV, the answer to a sick horse can come faster and improve outcomes.

The scope and sheer amount of work See LAB, Page 7

#### YOUTH EQUIDAY!

### Saturday, November 1, 2025 9:15am-11:45am

#### Miner Institute Horse Barn, 1034 Miner Farm Rd. Chazy, NY

Free and Open to the public.

Specifically for young equine enthusiasts, but please bring your adult to learn too! 4H'ers need to register with the County Extension office to get full credit. If you aren't with a 4H club, RSVP isn't required, but it will help us plan. Let us know if you're coming!

Email Karen at lassell@whminer.com or leave a message 518-846-7121, ext. 120. We'll be in the barn, so DRESS ACCORDINGLY!

#### 2025 Youth EquiDay topics:

- Bit and bridle fit
   Karen Lassell, Equine Manager
- No Hoof, No Horse! Horse Foot Health.
   Sam Pernia & Maddie Sauro, Equine Interns.



#### HEART'S DELIGHT SPRING PREMIER OPEN SHOW

Memorial Day weekend at the Clinton County Fairgrounds saw over 80 horses entered at the HDSP Open Show! We continue to be grateful for the support of the local horse community to help make this show grow annually. It was a special treat to have 20 of those 80 horses be Morgans; Lightening's Glittering Ice with Julia Cluss was the High Point and JDS Bedazzled and Erin Howrigan captured the reserve for the Morgans. Other divisions and their winners: Adult CH- Seeking Exposure and Alexandrea LaValley, ResTotally Exposed with Erin Worrell; Senior CH- Imaginary Rules and Avery Rotella, Res- A Sudden Suggestion with Sophie Everest; Junior CH- LER Blazin on the Rocks and Mallory Peters, Res- Leaguer By Design with Evvie O'Brien; Pony CH- Clearly Fashionable and Victoria LaValley, Res- Windy's Big Bang Theory and Isabella LaCount; Beginner CH- Call Me Victor with Bryana Fowler, Res- Sunny Side Up and Maeve La Bossiere; Walk/Trot CH- Once Upon A Time with Jasper Simmons, Res- UVM Nebula and Rachel Wheelock; Ranch CH- Imaginary Rules and Avery Rotella, Res- Sonnys Colored Barbie and Kennedy Columbus.

What we didn't know when we handed the reserve champion ribbon for Ranch Horse to Kennedy Columbus is that it would be the last HDSP we'd get to enjoy her positivity, great sportsmanship, and shared love of horses. Tragically, Kennedy lost her life in an accident only a few weeks later, just shy of her giving the valedictorian speech at Chazy Central School's High School Graduation. Kennedy was a bright star on so very many fronts- in Tangled Reins 4-H club, school, softball, and among her friends and her loving family. A memorial scholarship and donation source to causes important to Kennedy has been set up in her honor; please consider making a donation to this worthy cause through the QR code.



Kennedy Columbus at the 2025 HDSP.



# INVESTIGATING BEMER THERAPY FOR EQUINE ANESTHESIA RECOVERY

In December of 2024, the journal Animals published a study that explored the effects of Bio-Electro-Magnetic-Energy-Regulation (BEMER) therapy on equine recovery following general anesthesia. BEMER therapy, a form of pulsed electromagnetic field (PEMF) therapy, is often used in equine rehabilitation and care. It is believed to improve microcirculation, which helps deliver oxygen and nutrients to tissues. These are critical during and after surgery.

The study focused on 100 horses undergoing a pars plana vitrectomy, a common surgical treatment for Equine recurrent uveitis (ERU). Horses were randomly divided into two groups. One group received BEMER therapy (B+ group) for 15 minutes during surgery while the other group received a visually identical placebo treatment (P- group). The blankets looked the same to practitioners so they did not know which horses were undergoing treatment.

Researchers predicted that the BEMER group would show improved cardiopulmonary function, lower lactate (an indicator of tissue stress) levels, and smoother recoveries. However, the results



were unexpected; horses treated with BEMER had significantly worse recovery scores compared to those in the placebo group. While all horses recovered without major injuries, the B+ group showed higher average recovery scores, indicating slower and less coordinated recoveries.

The study suggests that BEMER may have unintentionally enhanced drug absorption, leading to deeper anesthesia, which is known to prolong recovery time. Notably, no differences in blood pressure, oxygenation, or other measured health indicators were statistically significant. This may have been due to the short application window (15 minutes) or the specific type of surgery, which required

deep anesthesia regardless of group.

This study caught my attention not only for its unexpected results, but also because of my strong interest in equine therapy and rehabilitation. I've always been drawn to exploring non-invasive support methods for horses recovering from injury or surgery, especially tools that could be integrated into future careers in rehabilitation centers or performance horse training. While BEMER therapy is widely used in training barns and some clinics, this research highlights the importance of evidence-based application. It shows how well-regarded therapies may produce complex results, especially in high-stress medical environments.

Ultimately, the study emphasized the need for further research, including longer application time, border surgery types, and multiple observers to assess recovery. It also reinforced a valuable lesson that in equine care, therapies must be tested as rigorously as medications to ensure they're truly beneficial.

— Hannah Hennessey 2025 Summer Experience in Equine Management Intern, Stephens College



\* photo by Christopher Crosby Morris

# Check out the newly updated Miner Morgan Sales List!



## KOEHLER TOUTS MINER AND MASTERSON METHOD AS KEYS TO SUCCESS

ShyAnne Koehler believes the connections that can be developed with horses are unlike anything else. "I will never get over the smells, sounds, and feel of being around horses," she said. "It is an incredible feeling to have a horse let you in and provide relief of tension for them."

Koehler first came to Miner Institute as a student in the Summer Experience in Equine Management program in 2016 and then returned as a yearlong intern in 2019 after graduating from Truman State University in Missouri. She now lives in North Carolina and works at a private estate as the head show groom for their dressage horses. "I was initially hired because the owner began importing higher end dressage horses, and while these horses are trained up to Grand Prix, most lack proper ground manners to be handled safely," Koehler said. She offers the horses consistency as the sole person leading, grooming and working on in-hand training techniques to get the horses "to a level where all the staff at the barn can lead them effectively and safely."

Koehler is also a certified clinician in the Masterson Method of integrated equine bodywork. She uses this method to perform bodywork on the horses at the farm where she works and is also building a client list off farm.

"I was first introduced to The Masterson Method during my time at Miner," Koehler said. "I attended Equine Affaire and watched Jim Masterson perform demos on horses. I was fascinated and immediately began making connections with what I saw to some of the Miner horses."

The Masterson Method targets the horse's nervous system and works with the horse, rather than just being performed on the



ShyAnne Koehler with HD Villenova at Miner Institute in 2020.

horse, Koehler explained. "Because horses are prey animals, they will naturally hide their symptoms of pain and brace against tension. We use this knowledge to our advantage by working to stay below the horse's brace response," Koehler said. "This is usually in the form of softening your touch, but staying intent with where you are working. The horse must be an active participant. When you soften and step back, the horse will guide you to spots of tension."

Although there are numerous styles of bodywork, Koehler said she chose the Masterson Method "due to its global recognition and high credibility. It took me about two years to finish my certifications, and I feel quite proud to have earned a skillset that can really make a difference for horses."

Koehler credits her time at Miner for helping to advance skills that she relies on daily in her current job. "Miner single-handedly developed my skills in groundwork and handling skills that my current job was looking for. Miner is also such a special place where learning is a priority," she said. She recalled how one of the four foals born at

Miner during her summer internship was orphaned when its mother developed severe colic. The interns had to bucket feed the foal, "Peanut" every two hours around the clock. Another mare was induced into lactation and became Peanut's foster mom. "That experience was so emotional and stays with you forever," Koehler noted.

"I gained exposure in stallion handling, collecting, breeding, foaling, and shipping collections out," Koehler reflected on her experience at Miner. "I attended breeding workshops and sports medicine seminars. I learned to carriage drive, longline, and begin to teach training techniques to young and green horses. I became confident in giving injections, wrapping, and many other first aid techniques. I helped handle yearlings on stall rest after surgeries and injuries," she recalled. "I learned to lead by example and progressively think of how the day will unfold."

Koehler's experience at Miner Institute is something that she deeply values. She offered that she still keeps in touch with the other interns and the yearlong intern from her summer and she recently visited Equine Manager Karen Lassell at Miner Institute. She highly recommends the program to college undergraduates who are interested in pursuing a career in the equine industry. "Doing the summer experience and later the yearlong intern position was one of the best things I have ever done," Koehler said. Her advice for anyone hoping to pursue an equine career is to always be willing to continue to learn. "The equine industry is a lifelong pursuit. Your biggest downfall is believing you already know enough in this industry. At the end of the day, trust that the horse will tell you what is right."

— Rachel Dutil dutil@whminer.com

#### FEEDING FOALS BEFORE BIRTH

Physicians routinely advise pregnant patients about nutrition and how eating healthy food is better the baby. Although recommendations can run the gambit, it's generally advised that individuals carrying a fetus should consume a wellbalanced diet with appropriate, vitamins, minerals, protein. and healthy fats. The reason for this is placental transfer;



substances in the circulatory system of the pregnant adult transfer to the placenta through processes like diffusion. It's why pregnant women are advised not to drink alcohol, since it can easily enter the placenta and cause developmental issues. Horses, like humans, are placental mammals, and it has been assumed that they too experience placental transfer. However, there are not many studies that define how this transfer works or if it is any different from what is observed in humans. A recent study, published in May 2025 in the journal *Animals*, takes a closer look at how third-trimester pregnant mare nutrition affects the levels of essential fatty acids (EFAs) in foals.



The three EFAs evaluated in the study were Docosahexaenoic Acid (DHA), Eicosatetraenoic Acid (EPA), and Alphalinolenic Acid (ALA). DHA and EPA are important for early equine brain and visual development, but high quantities aren't found in normal equine forages. Fish oil provides an excellent source of these EFAs. Researchers used this as a supplement for pregnant mares to see if it would make a difference in the foal, despite some mares best efforts to not eat it. The study was originally looking to see if there would be a higher concentration of DHA in the supplemented mares' milk, but surprisingly there was no significant difference between supplemented mares and un-supplemented mares. However, foal blood tests showed that the offspring of supplemented mares had significantly higher circulating DHA and EPA levels. This led to the conclusion that placental transfer of fatty acids provided the foals with increased DHA and EPA levels in their blood.

While this study was small with only thirteen horses used, the findings indicate a need for more research on the topic and breeding managers should keep an eye out for more information. Losing out on these fatty acids can completely change the development of a newborn and considering how costly a foal can be in relation to the low cost of fish oil; it is a supplement to consider if it is proven to be effective. In the meantime, research to find a way to convince picky mares to eat fish oil would be helpful!

— Claire Arnold

2025 Summer Experience in Equine Management Intern, Virginia Tech

# THE RELATIONSHIP BETWEEN FEAR & TRAINING

When it comes to training horses, understanding their behavior, as well as what causes fear, is paramount. Human understanding of behavior will maximize the horse's learning capacity, as fear is shown to inhibit learning as was published in a study by Górecka-Bruzda et. al., in 2013. Temple Grandin summarizes horses' temperament well, stating that "A horse is all about flight, and fear is the dominant emotion." Being prey animals, horses are skittish, making them easy to startle and traumatize, so it is important to act with care around them. For example, rapid and unfamiliar movement can be fearinducing to the horse; moving slowly and deliberately will help keep them at ease. Try to keep each new experience with the horse positive. A novel, fearful experience is likely to create a lasting memory, and it is easier to make a horse's first experience positive, rather than training the fear out of them. Fear is the root of many behavioral problems that humans encounter. A horse being calm and at ease in a training situation makes learning easier and safer for everyone. While preventing fear is critical, it is also important to recognize the signs of fear should it arise. Fearful horses tend to switch their tail, which grows faster the more fearful they become. Additionally, they may hold their head up higher, sweat, quiver, and their eyes will widen enough to see the sclera, the whites of the eye. Through recognizing the signs of fear, the trainer will be able to prevent scary experiences and mitigate the anxiety.

Learning is an integral aspect when

it comes to training horses, so it is imperative that the trainer, being the teacher, understands how horses learn. On a physiological level, excitement increases episodic memory retention because there is more activity within the amygdala and hippocampus, two centers in the brain associated with memory. Hence, it is important for horses to be mentally stimulated when learning. Increased activity in the brain can occur from either positive or negative emotions. It is important to note that horses can be emotionally excited without feeling fearful. Horses will learn best when they are calm, but still alert and aroused; if a horse's threshold for alertness is exceeded and turns to fear, research has demonstrated that learning and memorization capabilities are inhibited. Understanding a horse's learning processes, types of conditioning associated with training, and even the physiology behind horses' learning is of great importance if a trainer wants to use teaching methods to help the horse learn best.

In training, using methods that fit with the horse and understanding how the horse's emotions are being affected by the training are tethered. Horses can be very fearful animals, so when training a horse to do a task that is initially frightening, such as loading into a trailer, there are ways to work with the horse and reduce or prevent their anxieties. A good horse trainer knows to allow the horse to habituate to the fearful stimulus slowly so that the horse does not become

overwhelmed. One way to do this is through systematic desensitization, which involves repeatedly exposing an animal to a stimulus that they perceive as dangerous so that their fear of it decreases over time. However, in order to be done correctly, the experience and exposure must be of a low enough intensity as to not trigger the fear response. Using the trailer example, this might look like leading the horse to the trailer, letting it sniff the vehicle, slowly showing the horse the interior, before working up to loading the horse. It's important to take a proactive approach to fear; the trainer must closely monitor the horse for early signs of anxiety before the horse becomes too aroused and "explodes," or when their fearful behavior significantly escalates. This is why it is so important for trainers to understand body language; they must be aware of subtle signs in order to prevent a fearful response from the horse which shuts down learning.

It is important to be able to read body language to optimize equine training. Since fear negatively impacts how horses respond to training by inhibiting their learning processes, it is crucial to minimize fearful experiences and emotions. For information on the sources used for this introduction to the connection of equine learning and fear, don't hesitate to reach out and be sure to sign up to join us for the December 13 seminar on Horse Behavior!

— Samantha Pernia spernia@whminer.com

#### SAVE THE DATE!

### **HORSESPEAK PRESENTATION: DEC. 13, 2025**

Join us on Saturday, December 13, 2025 at 1 pm in the auditorium of the Joseph C. Burke Education and Research Center at Miner Institute, 586 Ridge Road in Chazy. We will be hosting Sharon Wilsie, PhD, author, researcher, and founder of HorseSpeak; she will give a presentation titled: "Is your horse secretly dysregulated? Decoding stress in Equines with HRV and body language." The presentation will also be livestreamed.

Join Dr. Sharon Wilsie for a fascinating exploration into the hidden world of equine stress and nervous system regulation. Drawing on over 20 years of research, Dr. Wilsie will reveal how horses communicate their inner state through subtle micro-gestures and how pairing these signals with Heart Rate Variability (HRV) monitoring offers a revolutionary way to understand equine well-being.

#### Topics include:

- The 5 Hidden Signals of Stress in Horses
- Polyvagal Theory and the Autonomic Nervous System in Equines
- HRV as a non-invasive tool for measuring equine regulation
- Case studies, including the story of "Bob", a gelding who transformed through co-regulation
- Implications for equine therapy, training and welfare.



Sharon Wilsie greeting Morgan stallion, Canon, in the Miner Institute Horse Barn a few years ago as part of a HorseSpeak Clinic.

This event is ideal for veterinarians, trainers, equine therapy providers, and anyone seeking a deeper bond with horses through science and compassion.

There will be registration for this FREE event as seats and online viewing may be limited.

Keep following social media (https://www.facebook.com/HeartsDelightMorganHorses) or email Karen at lassell@whminer.com for updated information.

### LAB, Continued from Page 1

conducted by the lab is huge! From forensic pathology to aid in the prosecution of neglect cases, to widespread disease considerations such as Equine Herpes Virus outbreaks, to diagnostic tests to understand the health concerns of your beloved equine companion, the VDL is part of the backbone of the equine industry and all animal health in NY: production, companion, and wildlife. The strength of the lab comes from within by way of its strategic plan, but also from the support of key stakeholders. As members of the community, the NYSHC supports the lab as a group, but I also encourage you, the individual members, to reach out to representatives, state and national, to thank them for their continued financial support of the important work the NYS VDL does.

If you have comments about the VDL, they're open to hearing from you, or I'm happy to bring them to the Advisory Board.

— Karen Lassell NYSHC Northern Regional VP lassell@whminer.com The William H. Miner Agricultural Research Institute 1034 Miner Farm Road P.O. Box 90 Chazy, NY 12921

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#### FEATURED MINER MORGAN: HD Thendara (Legacy's Viking x Seaway Showgirl)







"Dari" was born in 2002 and was right away an alert, bouncy filly! Always a smart one, Dari learned fast, but was a natural worrier. Dari caught the eye and heart of a student who bought her as a mature mare and kept her at their farm of employment. Through a series of events both in Dari and her person's life, Dari came home to retire to Miner entering probably the most important phase of her life! Out in the mares' pasture, Dari is the epitome of a great herd leader. She demonstrates clear, but kind boundaries, and concern for her herdmates. Watching Dari communicate with them has been so instructive in herd dynamics and breaking down some old held notions of a strict dominance theory, in favor of a more fluid social structure based on conflict avoidance, safety and comfort. Dari is a prime example of "knowing what I know now" might have served her better 20 years ago, but we are grateful that horses are forgiving creatures and let us grow with them.

Learn more about the Miner Morgans at www.whminer.org/equine.html