Fall 2020 Newsletter

AAEVT

American Association of Veterinary Technicians & Assistants

Message From Our President

To my fellow technicians and assistants –

This year has proven to be one to put in the history books for sure! Throughout all of the turmoil and uncertainty that the pandemic and election has brought us, we as an equine community never wavered in our commitment to the horse. This year has taught us so many lessons about life that it has made me reflect on what is most important in our lives, how to be flexible and adapt to the ever changing work landscape, and how we can come together in a time that needs us to be distant.

This shall pass in time and what gives me solace is that our community of technicians and assistants is very resilient and never ceases to amaze me with our creativity and innovation in the face of adversity. This is when we rise and really show what we are made of. With every passing week, we prove that nothing can hold us back and the horse always comes first. The horse doesn't care about viruses and hardship. They need us to be the constant in their lives which in turn provides us all with a sense of continuity during 2020.

While we have missed all your beautiful faces over the last 9 months, we have tried our best to maintain our standard of quality CE virtually. We hope that AAEP will not disappoint either. The AAEVT is very committed to bringing exceptional educational content to you. There are several fabulous speakers on our line up so please be sure to peruse the program and sign up!! I am so incredibly hopeful that 2021 will lead to us back to reconnecting and building our community bigger, better and stronger than ever!

I have been so proud and honored to be your president this past year and hope to be able to serve you in the future with more educational opportunities, networking, community and mentorship.

Best wishes to you all and I hope everyone has a wonderful holiday season!

Nicole Bone, BS, LVT
2020 AAEVT President

Cowgirl Dreams/Facebook

2020-21 CE EVENTS:

NEAEP AAEVT Virtual CE Event
Ends Dec 30, 2020 • www.theneaep.com/symposium-2020

AAEVT AAEP Annual *Virtual* Convention
December 1, 2020 - June 30, 2021
www.aaevt.org/2020-annual-convention-virtual

Potential Locations for AAEVT CE Events in2021:
Anesthesia Events: Ocala Equine, FL and Montana
Cornell University • DesertPines, NV • Palm Beach Eqine, FL
Starwood Equine or Peninsula Equine - CA • Rood and Riddle/Hagyard, Park Equine
NEAEP 2021 - Saratoga Springs • TEVA 2021 - Texas
AAEVT AAEP Annual Conference - Dec 4-7, 2021. Nashville, TN
For more information, visit: **www.AAEVT.org/ce-events**

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Welcome to Our New Executive Board Members

Jlynn Meyer, LVT

Jlynn finished his Associates in Veterinary Technology at Alfred State College in Upstate NY and attained his AVMA License in 2012.

He then worked at Peterson & Smith Equine Hospital in their Ambulatory/Theriogeniology Department for 6 months and continued on at Peterson & Smith for 2 more years in their Surgery and Medicine Department.

Moving back to NY he took a position with Cornell University, specializing in Emergency and Critical Care. He also works part time doing Ambulatory work with the Finger Lakes Equine Practice.

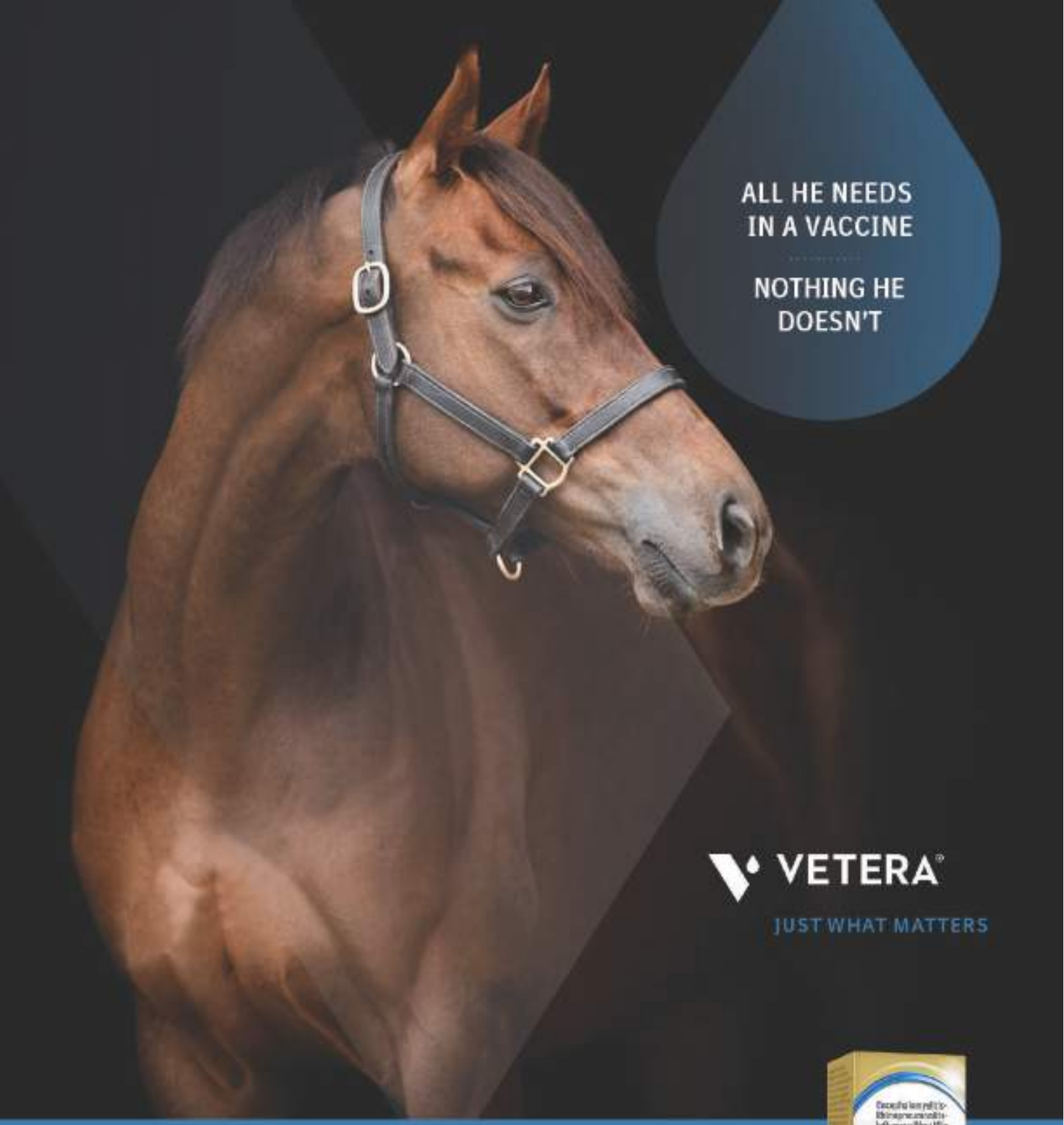
In his spare time Jlynn enjoys riding his Quarter Horses, going hiking with his dogs and Line Dancing! He has been an AAEVT member and Regional Contact since 2014.

Amanda Compton, B.S., EDT, LVT, RVT

Amanda earned her Bachelor of Science degree in Animal & Veterinary Sciences from West Virginia University & later her Associates degree in Veterinary Technology from Northern Virginia Community College, where she also served as Vice President on the college's Vet Tech Advisory Committee.

For the past two decades, she has had her own business as a registered equine dental technician, partnering with many veterinarians to provide services. She holds the distinction of being the only licenced veterinary and equine dental technician with the Virginia Board of Veterinary Medicicne. She lives in Middletown, Virginia but spent two years working the Middle East, assisting with the start up of the Equine Veterinary Medical Center in Doha, Qatar. Prior to that, Amanda spent 11 years working at Virginia Tech's Marion duPont Scott Equine Medical Center in the equine nursing department She has been named the AAEVT's Member of the Year, Northern Virginia Community College's Veterinary Technician Student of the Year, and Potomac State College's Young Alumni Award Recipient.

In addition to her equine dentistry business, Amanda currently works with Blue Ridge Veterinary Associates and enjoys the areas of surgery and anesthesia In her spare time, Amanda spends most of her time outdoors, hiking with her rescued Salukis and showing her Arabian horses in sport horse and carriage driving.



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Greetings from the Academy of Equine Veterinary Nursing Technicians

The year 2020 has been a strange and unexpected year for our Academy; just as many of you saw your wonderful plans change as the year developed, so did AEVNT's. Despite the frustrations that we have all felt, the Academy Board has taken steps and measures towards solidifying our growth with updates and improvements.

The AEVNT is currently accepting Letters of Intent to apply to the Academy in 2021, now through March 15th, 2021. All information can be accessed on our website at http://www.aevnt.org, and we welcome any questions you might have towards the what, why and how of the application process. During National Veterinary Technician Appreciation Week, our Immediate Past-President, Sue Loly, hosted an hour-long Webinar on the Journey Towards Becoming a VT Equine Specialist. It was well received, and we plan to revisit this topic throughout the coming months.

In addition, the Academy is excited to begin featuring a monthly Webinar series, "Equine Vet Tech's Happy Hour," beginning in January. These virtual rounds will cover topics pertinent to the equine technician seeking to advance their knowledge and will be presented by our VTS-EVN members. I invite all technicians and support staff to join us, particularly those interested in applying to the Academy. More information is forthcoming and can be accessed on our Facebook Page, http://www.facebook.com/aevnt.vts.evn. If you are not on social media, or wish to contact me directly, please email me at info@aevnt.org. I also encourage those hungry for knowledge to check our website and social media periodically to access a forthcoming Speaker & Publications Library.

We wish you all of the best in the coming months: may your cases bring you joy, may your technical skills grow and may you be rested before foaling season.

For the Love of the Horse,
Molly Cripe Birt, BS RVT, VTS-EVN
AEVNT President 2020 - 2022

2020 AAEVT Vet Tech Week Winners

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The Happiness Project

Amanda Compton, B.S., EDT, LVT, RVT

Recently I was invited to speak at the West Virginia Veterinary Medical Association's Annual Meeting at the historic Greenbrier Hotel in White Sulphur Springs, West Virginia. I decided to branch out from my usual clinical talks on equine dentistry or nursing care and speak about something more personal. I wanted to discuss my experiences and thoughts on work life balance, burnout, and compassion fatigue.

My idea for my presentation came to me while attending the AAEP/AAEVT 2018 Annual Meeting in San Francisco. I listened to numerous speakers who made an impression on me that year, perhaps because I was experiencing a low point in my career, which was brought on being overworked, understaffed, and dealing with toxic management at the equine hospital where I was working. Management had asked each of us who attended AAEP/AAEVT to share with the rest of hospital staff what we had learned. I used the points that resonated with me, from various speakers, to put together my presentation.

Two questions that were asked during a lecture at AAEP/AAEVT were: "How happy are you at work? How busy are you at work?" At the time, my happiness was at the very lower end of the spectrum, while myself and all of my team members were struggling to get through the day's appointments, emergencies, hospitalized patients, billing, etc. with only minimum support. I learned from that lecture that we should all strive to be just a little bit happier in life than we are busy, something that was not looking attainable at the hospital where I was working and had set very high expectations of.

> *"How happy are you at work? How busy are you at work? ...we should all strive to be just a little bit happier in life than we are busy..."*

Unhappiness affects and influences our coworkers, our clients, and our patients. When we are unhappy, our body language changes, it affects our speech and our work performance. As our unhappiness persists, our frustration increases. Frustration is the feeling we deal with when our expectations are not met. Frustration can be defined as the gap between expectation and reality. The only way to fill the gap is to either lower expectations or improve your reality. Often our expectation of a job, a co-worker or even a particular hospital case is not met. We need to recognize that it is okay to lower our expectations occasionally. Sometimes we need to improve our reality by changing the situation we are in. Instead of asking myself "Why am I unhappy?" I now ask the question "Why am I frustrated?" and try to change the situation.

I learned that managing the workday can lead to less frustration. I like the following points one of the speakers pointed out about our jobs:

1. There are things we love to do and do well.
2. There are things we love to do and do not do well.
3. There are things we hate to do and do well.
4. There are things we hate to do and do not do well.

Find out what you love to do at work and do it well. Then share that skill so others can learn from your expertise. If there is something you enjoy doing but are not as skilled at, seek others who can teach you how to improve those skills. All of us have tasks we dislike, but we are proficient at. Realize that this may only be a small part in your workday. Speak with your employer and offer to train someone who may be better suited at that task. Lastly, there are tasks we hate in our work-life and we do not do well at all. Speak with your manager and explain your feelings. They may not even be aware of your situation or frustration and you cannot expect your situation to change if you do not communicate.

Unhappiness (aka frustration), poor work life balance, and poor management all contribute to compassion fatigue. The following quote by Dr. Charles Figley, MD, a mental health professor at Tulane University, sums it up very well:

Michael Pintar Photography

continued on next page

Congratulations to the 2020 Scholarship Recipients

Anne Bailey Scholarships – This scholarship fund was established to assist equine veterinary technicians, assistants and students in attending AAEVT continuing education courses, AAEVT meetings, equine related online courses, and/or assist with tuition costs involved in obtaining their veterinary technology degree.

Jennifer Eccleston • *Megan Jenks* • *Anne McCleary* • *Elyse Scott* • *Laura Teets*

Milissa Finnegan Scholarship – To encourage technicians and assistants to reach their goals, the Milissa Finnegan Scholarship is for members who are enrolled in the AAEVT Online Certificate Academy program.

Emily Keena

The funds for these scholarships come from YOU and your peers! The generous donations received at Silent Auctions and Raffles that we hold at our CE events throughout the year, and from select Sponsors, provide the funds for us to offer these amazing Scholarships.

The Happiness Project, continued

"Compassion fatigue is a recent concept that refers to the emotional and physical exhaustion that can affect helping professionals and caregivers over time. It has been associated with a gradual desensitization to patient stories, a decrease in quality care for patients and clients (sometimes described as "poor bedside manners"), an increase in clinical errors, higher rates of depression and anxiety disorders among helpers and rising rates of stress leave and degradation in the workplace climate. Helping professionals have also found that their empathy and ability to connect with their loved ones and friends is impacted by compassion fatigue. In turn, this can lead to increased rates of stress in the household, divorce and social isolation. The most insidious aspect of compassion fatigue is that it attacks the very core of what brings helpers into this work, their empathy and compassion for others."

Once an employee has experienced chronic compassion fatigue and the factors that contribute to it, burnout is almost inevitable. Burnout unfolds gradually in response to daily stress in the work environment because of daily emotional and physical stress. Statistics show that we have a higher attrition of veterinary technicians than that of veterinarians. With 57% of licensed veterinary technicians leaving the field within five years of graduating, it is no wonder veterinarians are having difficulty finding new employees. When I have found myself having conversations with practice owners seeking LVT's, I have noted that they often offer low starting wages and expect demanding hours, particularly in equine practice. We need to change the concept that this is acceptable in our profession. Technicians have families, mortgages and responsibilities outside of work, same as our doctors, but they have traditionally been expected to accept those working conditions, as is. Replacing a veterinary support staff member can cost the practice 50-75% of an individual's annual salary. Retention of quality staff members costs the business less in the long run.

"Self-care does not look the same for everyone; for some it is reading a book, exercising, spending time with our own pets, or turning off our cell phones and not answering emails on our days off."

To help combat compassion fatigue and burnout, studies have shown that self-care and setting boundaries is imperative to our mental and physical well-being. Self-care does not look the same for everyone; for some it is reading a book, exercising, spending time with our own pets, or turning off our cell phones and not answering emails on our days off. Ultimately, it is your responsibility to take care of yourself and no situation or person can justify neglecting it. As veterinary professionals, we are bombarded with interactions on a daily basis from co-workers and clients. It is okay to set boundaries with those around us and we should not feel guilty when doing so.

Everyday we influence those around us by our actions, reactions, and words. We all can empower each other. On average, we spend more time at work with our colleagues than we do our families. Our common interests caring for animals, has brought us together. Despite our varying backgrounds, life-experiences and personalities, our commonality is what drives us to be in veterinary medicine. Staying in the profession is not always easy, but achieving a work-life balance and career longevity is attainable when we advocate for ourselves and help support each other to combat compassion fatigue and burnout.

Skin issues plague horse owners and veterinarians all year round.

From wounds and injuries to lesions caused by a multitude of dermatological reasons, finding a topical product that can effectively aid in the treatment of a wide range of skin issues while offering a stable environment to facilitate healing is a daunting task. Until now…

Over a decade of research has been performed on Amorphous Silica Nanoparticles (SNP). This technology is an effective delivery method for Orthosillicic Acid (OSA) which is the bioavailable form of silicon that favors wound healing. OSA reportedly accelerates wound cicatrisation by stimulating basal epidermal and dermal fibroblast cells.

The SNP's character stimulates T cell receptors which secrete regulatory molecules such as growth factors and cytokines to stimulate epithelial cells within the injury providing healthy tissue without negative granulation such as proud flesh.

We at Zarasyl have harnessed this technology to bring to the veterinary market a topical cream utilizing the benefits of Amorphous Silica Nanoparticles. Zarasyl contains a proprietary amorphous silica, with a molecular structure tailored to provide sustained delivery of OSA to the skin. The oil-free PEG base ensures a moist, anti-microbial and semi-occlusive environment allowing oxygen to the area.

Sure, there's real science, but does Zarasyl work? Just ask Gunnar - a 6 year old Paint gelding in Michigan developed cellulitis secondary to a barbed wire laceration to his left

hind leg. As a result of the cellulitis, Gunnar sloughed his entire hoof capsule. Gunnar has been receiving daily application of Zarasyl which began 18 days post initial injury, after he continued to decline and was given a grave prognosis. His owner was desperate to try anything, and then she found Zarasyl. Gunnar's wounds and hoof regrowth are remarkable, and he is now expected to make a full recovery!

For more information visit: www.Zarasyl.com

To read more about Gunnar's case go to: www.zarasyl.com/pages/gunnar-case

Zarasyl

Detect and Monitor Equine Inflammation Due To Infection in 10 Minutes

Use Stablelab® to measure Serum Amyloid A, a reliable biomarker for infection in horses

Equine influenza virus (EIV) outbreaks can be frightening for how quickly it can spread in horses. Imagine being at a horse show or at a barn where a few horses come down with fevers of 102°-105° F and nasal discharge. You suspect EIV. But how can you know for sure? And how can you quickly identify inflammation due to infection?

This was the position Holly Helbig, DVM and owner of the Hawthorne Veterinary Clinic, found herself in while caring for horses at a show. She suspected EIV due to the signs presented, and knew she needed to act quickly to protect the other horses.

"Once a case of EIV is confirmed, horse owners worry that their horses could have been exposed or possibly infected," Helbig said. "Horse owners are looking for a quick response for peace of mind. That is where SAA testing with Stablelab comes in."

Detecting Inflammation Due To Infection With SAA

Serum Amyloid A (SAA) is a major, acute phase protein produced by the liver that is a reliable biomarker for inflammation due to infection. SAA levels rapidly and dramatically increase in response to an infection.1 Using Stablelab®, a hand-held stall-side diagnostic blood test, Helbig and her team conducted SAA tests on a large population of horses at the show. In 10 minutes, Stablelab detected inflammation due to possible infection in some of the horses before they showed clinical signs such as a fever.

"At a show, I will have upwards of 700 horses under my care, so the SAA testing provided crucial information to help guide me in determining what horses needed to be isolated," Helbig said.

Monitoring Equine Influenza With SAA

Dr. Helbig developed and quickly implemented a plan of action to isolate and care for possible infected horses. SAA testing with Stablelab provided the results needed to successfully enforce the plan, which included:

- Monitoring horses in different barns that potentially came into contact with an infected horse at the show.
- Conducting an SAA test on horses showing EIV signs and obtaining results without leaving the horse's side.
- Isolating horses with SAA levels greater than 50 and then testing for EIV.
- Quarantining EIV-positive horses to minimize the risk of spreading EIV.
- Conducting follow-up SAA tests three days later to monitor treatment response.

"In my practice, I use Stablelab primarily for a fever of unknown origin, cellulitis and respiratory issues when I am

at horse shows. In cases like this one, where I suspected EIV, Stablelab proved itself a valuable tool to help me to monitor, isolate and treat infected horses," Helbig said.

Incorporate Stablelab Into Your Practice

The ability to identify inflammation in infected horses before they show clinical signs is critical, not only for the health of the horse, but for your clients' peace of mind. Here are opportunities to incorporate SAA testing with Stablelab in your practice:

- Primary and ambulatory care: Stablelab was designed to be used in the field to provide results in 10 minutes without leaving the horse's side. Anytime you use antibiotics, test their SAA levels, quantify the inflammation due to infection and then use Stablelab to monitor the response to treatment.
- Reproduction: Pregnancy, parturition and the early neonatal period are high-risk life stages for the horse. Conduct SAA testing to identify inflammation and ward off potential health challenges.
- Referral hospital: Measure SAA as part of your minimum database at the time of admission. Screen for subclinical inflammation due to infection prior to surgery and monitor the response to treatment over their hospitalization.

To learn more about SAA testing with Stablelab, contact your Zoetis Equine Specialist or visit Stablelab.com.

stablelab

Online Certificate Academy

An online program that provides equine specific training – from basic to advanced – to those employed by the equine practitioner and those with an interest in the equine veterinary profession.

The program consists of 10 areas of study:

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Equine Veterinary Medical Terminology

Course II:
Equine Anatomy and Physiology
Equine Pharmacology
Equine Nursing Care, Medical Treatments, Emergency Care
Equine Diseases & Parasitology

Course III:
Equine Surgical Assistance and Anesthesia
Equine Laboratory Diagnostics
Equine Diagnostic Imaging Modalities
Equine Office Procedures

"This additional education I received helped to grow and solidify my knowledge, giving me greater self-confidence and enabling me to be a more valuable asset to my practice and MOST importantly, to the equine patients I care for! HIGHLY recommend this Certification Program!"
– Felicia W., RVT

Learn more at **www.AAEVT.org /online-certificate-program**
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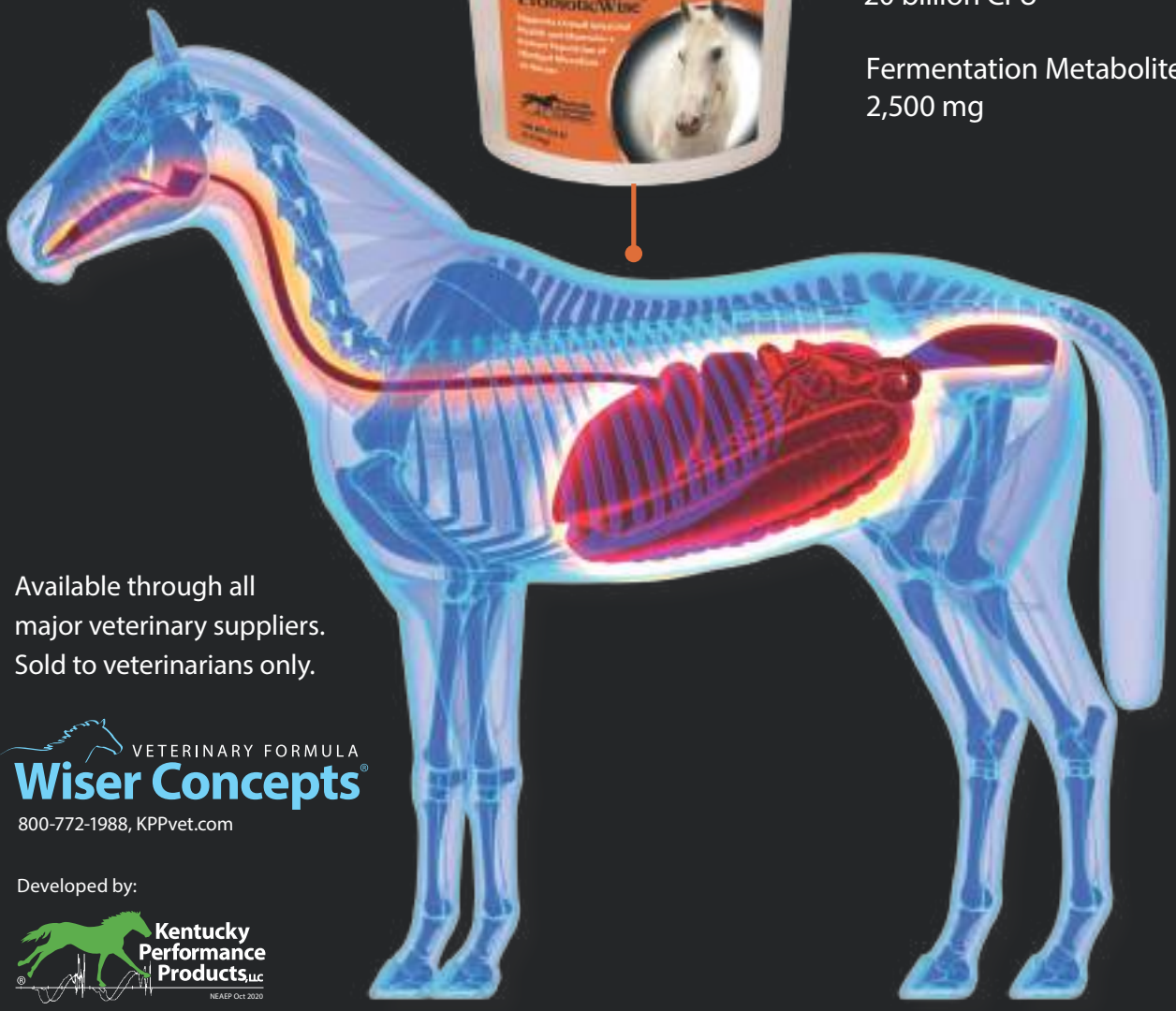

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** Research shows S. Boulardii plays an active role in supporting a healthy digestive tract.*

An influenza strain by any other name is just not the same

Tracking the ever-changing flu virus demonstrates that influenza vaccines and related practices must evolve with the strains

By Duane E. Chappell, DVM, Merck Animal Health Equine Veterinary Professional Services

There's much ado about flu of late and with good reason. The incidence of equine influenza virus (EIV) has been trending upward since 2008, showing considerable spikes in recent years.1 Equine influenza was the most common infectious upper respiratory disease of the horse in 2019, with significant increases noted in February, March and again in June.[1,2]

Adding to the flu intrigue is the high number of cases occurring in vaccinated horses. Of the horses with known vaccination status, 61% of positive EIV cases occurred in horses vaccinated against EIV.[2]

The impact from this growing flu threat is playing out in barns across the country. Its effects range from medical challenges to economic loss and time away from performance and production. Veterinarians tasked with managing cases face the daunting assignment of mitigating spread from this highly contagious disease.

So, what's driving this conundrum of increased incidence and apparent vaccine failure? The answers lie in understanding the virus's evolution, and a critical assessment of when and how we are vaccinating.

Tracking an Evolving Target

To find a plausible cause for the EIV vaccine failure that's been ramping up since 2013, researchers at the University of California, Davis School of Veterinary Medicine compared the heterogeneity of circulating wildtype EIV strains in the United States with Ohio '03 (OIE recommended clade 1 influenza strain) to determine whether vaccine failure was due to the introduction of foreign EIV strains or the natural selection of EIV strains (antigenic drift).

Their conclusion: Foreign EIV strains have not been circulating in the United States. Only EIV Florida clade 1 strains have been circulating and have evolved separately from clade 2 strains.[3]

"EIV strains are mutating through selection – antigenic drift – in order to escape the immune system," Kyuyoung Lee, DVM, MPVM, PhD Candidate and lead study author said. "Antigenic drift of U.S. EIV is the most plausible cause for the high rates of vaccine failure, underscoring the need to update vaccine strains."

Dr. Lee goes on to explain the role of sequencing to understand the significance of this antigenic drift. "While genetic analysis compares various strains and determines their homology, the number of single amino acid changes is not what's relevant. Instead, the important focus is the position of the amino acid changes as they pertain to immunodominant sites, which is determined through sequencing."

Different strains of EIV can be compared by sequencing the hemagglutinin (HA) gene. HA contains the receptor binding sites that enable the influenza virus to attach to host cells. If antigenic drift decreases binding of vaccine antibodies with the HA glycoprotein at these "key sites," it may cause reduced vaccine protection or a total lack of protection.

Learning from Outbreaks

Ongoing EIV sequencing through a process called genetic characterization (comparing genetic sequences of influenza isolates) is critical to making informed decisions regarding:

- How equine influenza viruses are 'related' to one another
- How equine influenza viruses are evolving
- The genetic variations (mutations) that appear when viruses begin spreading more easily or causing more-severe diseases
- How well an equine influenza vaccine might protect against a particular strain of circulating influenza virus

Recent equine influenza outbreaks bring this idea into focus. Consider the 2013 outbreak that occurred in southern Florida in a large number of well-vaccinated horses.

By analyzing samples submitted to the Equine Respiratory Biosurveillance Program, researchers identified and isolated a new influenza strain, Florida '13. Ongoing sequencing through the time of this article

continued on next page

Homology

Definition: The existence of shared ancestry between a pair of structures or genes.

Purpose: Identifies overall similarities between two samples to establish the comparison of like with like, such as comparing EIV with EIV vaccine strains versus comparing EIV with a rabies vaccine virus.

Genome sequencing

Definition: The process that determines the order or sequence of the RNA nucleotides (e.g., A, C, G, U) in each of the genes present in the virus's genome.

Purpose: Focused on the hemagglutinin (HA) and neuraminidase (NA) glycoproteins found on the virus surface, sequencing identifies the difference in key locations on the virus to determine how they impact disease spread or vaccine protection.

reflects that Florida '13 is representative of current circulating U.S. field strains. Florida '13 differs from Ohio '03 (OIE clade 1 isolate recommended for EIV vaccine production) by six amino acid changes, and all six of those mutations occur on the surface of the HA glycoprotein and are in or near regions associated with antibody binding or receptor binding sites[4] – making them critically significant.

In response to these findings, Merck Animal Health added in 2018 the Florida '13 influenza strain to the PRESTIGE® inactivated influenza-containing vaccines.

"Merck Animal Health is the leading industry partner that has realized the need to not only surveille respiratory viruses but also determine their evolution," said Nicola Pusterla, DVM, Dipl. ACVIM, who leads the UC Davis Equine Infectious Disease Research Laboratory where Biosurveillance Program samples are submitted and analyzed. "Overall, we are seeing greater numbers of EIV positive horses, not only in young unvaccinated horses but also in adult vaccinated horses. Unless EIV isolates are continually collected and analyzed, there will be no way to determine how different vaccine strains are from contemporary EIV strains."

New Vaccine Timing for 'Flu Season'

Recent data from the program compels a critical new question: Are we vaccinating at the right time of the year and are the recommended guidelines of biannual vaccination providing optimal influenza protection?

In addition to keeping vigil over mutating flu strains, Merck Animal Health tracks infection rates through the Equine Respiratory Biosurveillance Program. Every year since the inception of the study, data shows increased flu incidence beginning in December and running through April, which is typically prior to when at-risk horses are receiving their biannual EIV vaccinations.2 Following that logic, an EIV booster in late November or early December may be more advantageous than late summer or early fall.

With data clearly pointing to an equine flu season, veterinarians may benefit from critically evaluating the optimal time to administer biannual EIV vaccines. Even a one- to two-month adjustment in EIV vaccination timing could make a significant difference for the horse.

Additionally, ongoing (since 2008) Biosurveillance Program data indicates many horses are under-vaccinated – receiving just one EIV vaccination per year (or less), further complicating our efforts to contain this highly infectious virus.

Take-Home Message

Ultimately, that's the point of all this flu talk – doing what we can as individual practitioners and as an industry to keep horses as healthy as possible. Regardless of the disease, we must do our best to provide optimal protection through properly timed and administered vaccinations. The recent rise of EIV infections demonstrates the need for vigilant tracking and sequencing to keep up with antigenic drift. Data shows the virus is evolving and our vaccinations should evolve along with it. Florida '13 is an example of this important concept and has demonstrated through both homology and sequencing work that it is the closest influenza strain to what is currently circulating in our horses.

Impact of EIV by the Numbers

7 days.
Amount of rest a horse needs for every day of fever.

50 yards.
Distance a coughing horse can propel equine influenza virus.

7 to 10 days.
Length of time horses can shed virus following infection.

72 hours.
Length of time EIV can survive on wet surfaces.

48 hours.
Length of time EIV can survive on dry surfaces.

29%.
Incidence of equine influenza.[1]

[1] Merck Animal Health and University of California, Davis School of Veterinary Medicine (Nicola Pusterla). Infectious Upper Respiratory Disease Surveillance Program. Ongoing research 2008-present.

[2] Vaala W, Barnett DC, James K, Chappell D, Craig B, Gaughan E, Bain F, Barnum SM, Pusterla N. Prevalence Factors Associated with Equine Influenza Virus Infection in Equids with Upper Respiratory Tract Infection from 2008 to 2019. AAEP *Proceedings*. 2019 Vol 65.

[3] Lee K, Pusterla N, Barnum S, Martinez-Lopez B. Is Current Vaccine Failure of Equine Influenza Virus Due to Evolution of Endemic Strains or Introduction of Foreign Strains? AAEP *Proceedings*. 2019 Vol 65.

[4] Merck Animal Health Technical Bulletin, December 2019.

Exposure to equine influenza is a reality for every horse

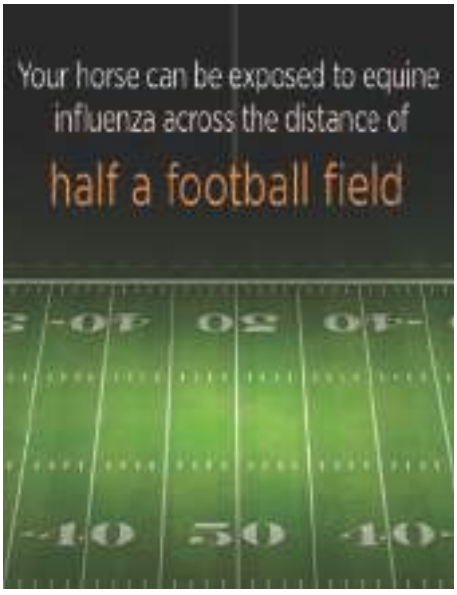
Without vaccination, infection is possible across distances and in everyday care

By Kevin Hankins, Senior Veterinarian, Equine Technical Services, Zoetis

QUICK TIPS

How close would you let a horse come to equine influenza? Of course, no one wants their horse anywhere near such a dangerous risk, but even half a football field away may still not be far enough to safely protect him from exposure to equine influenza.

Equine influenza virus (EIV), commonly known as the flu, is highly contagious and capable of traveling 150 feet through the air.1 It is transmitted rapidly from horse to horse over long distances and can survive on hands, clothing, brushes, buckets, stall walls, feed troughs, trailers and more.[1] Flu infects the respiratory tract, including the cilia, which keep debris out of horses' lungs. When the cilia fail to keep bacteria from the airway, your horse is at risk of a secondary bacterial infection, making EIV even more devastating.[1]



Contagious at 50 yards

Equine influenza spreads by coughing and can travel half a football field — that's 50 yards. Playing with a virus that's contagious over such extreme distance is a game no horse owner wants a part of. Vaccination that provides protection from exposure can be extremely beneficial.

Any horse that travels is at risk of exposure to developing a fever, coughing and nasal discharge from equine influenza. An EIV infection can cause lengthy time off for the horse and, again, it is the leading infectious cause of death in horses.

Understanding how simply EIV is transmitted helps you understand the risks you're taking if your horse isn't vaccinated.

Vaccinate to provide broad protection against EIV risks

Adult horses, in general, should be vaccinated annually against EIV, and those with increased exposure risks should be vaccinated every six months. Vaccination with FLUVAC INNOVATOR® provides protection against EIV and the many highly contagious ways it can spread to infect a horse. Since 2002, FLUVAC INNOVATOR has been tested against 29 emerging equine influenza virus isolates from top equine states, ensuring the vaccine remains immunologically relevant.[2-8] Further, the Gluck Equine Research Center performed research using 37 EIV viruses from 24 different states to demonstrate cross-protective immunological relevance against recently isolated EIV strains.[8,9]

Tested and proven against current flu strain pressures in the U.S., FLUVAC INNOVATOR also is backed by the Zoetis Equine Immunization Support Guarantee. This guarantee provides up to $5,000 for reasonable diagnostic and treatment costs if your horse is properly vaccinated by a veterinarian and contracts the corresponding equine disease.

Talk to your veterinarian about vaccinating against this common but costly disease, and learn more about equine influenza at FluvacInnovator.com.

When care becomes contagious

In addition to the rapid horse-to-horse spread up to 50 yards in the air, EIV can survive on your hands and clothing, along stall walls and simple equipment like brushes, buckets, trailers and feed troughs. Without vaccination against EIV, worrying about the virus traveling on all these surfaces becomes part of caring for your horse.

About Zoetis

Zoetis is the leading animal health company, dedicated to supporting its customers and their businesses. Building on more than 65 years of experience in animal health, Zoetis discovers, develops, manufactures and commercializes medicines, vaccines and diagnostic products, which are complemented by biodevices, genetic tests and precision livestock farming. Zoetis serves veterinarians, livestock producers and people who raise and care for farm and companion animals with sales of its products in more than 100 countries. In 2019, the company generated annual revenue of $6.3 billion with approximately 10,600 employees. For more information, visit ZoetisUS.com.

[1] American Association of Equine Practitioners. Equine Influenza Guidelines. Accessed July 31, 2020. [2] Data on file, Study Report No. 671-02-001.R, Zoetis Inc. [3] Data on file, Study Report No. 671-08-004.R, Zoetis Inc. [4] Data on file, Study Report No. 766-09-002.R, Zoetis Inc. [5] Data on file, Study Report No. 10OREQBIO-01, Zoetis Inc. [6] Data on file, Study Report No. 14OREQBIO-1, Zoetis Inc. [7] Data on file, Study Report No. 15EQRGBIO-02, Zoetis Inc. [8] Data on file, Study Report No. 18EQRGBIO-01-02, Zoetis Inc. [9] Data on file. Study Report No. 19EQRGBIO-01-02, Zoetis Inc.

Times Have Changed. Your Horse's Parasite Control Program Should Too.

Combat today's most harmful parasites with the experts' deworming treatment of choice.

By Kenton Morgan, Senior Veterinarian, Equine Technical Services, Zoetis

Decades ago, large strongyles (bloodworms) posed the greatest threat to horse health. But thanks to modern dewormers, this parasite can be more easily controlled and should no longer keep you up at night. The greatest parasite concern for adult horses today is the small strongyle[1], making it imperative that your horse receives timely treatments each year. Do you know whether your horse has the necessary protection against small strongyles?

Small strongyles, big threat

Small strongyles pose significant risks for adult horses because their larvae (immature parasites) can burrow into your horse's intestinal lining. This part of their lifecycle is called "encysting." The emergence of these encysted larvae from the gut wall can be extremely concerning. Experts believe this process can cause harmful inflammation of the gut, which could be associated with a host of serious health problems such as increased risk for colic and weight loss over the course of your horse's adult life.

The American Association of Equine Practitioners (AAEP) Parasite Control Guidelines specifically recommend treating the encysted stage of small strongyles at least once per year to protect your horse's health.

The must-have dewormer active ingredient

Two deworming active ingredients are currently labeled as effective against the encysted form of small strongyles – moxidectin and fenbendazole. However, due to the evolving issue of parasite resistance, research studies have demonstrated that fenbendazole is no longer effective against small strongyles.[1,2]

In two recent blinded anthelmintic efficacy studies performed in the U.S. with two different equine populations have documented a clear loss of larvicidal efficacy of the five-day double-dose fenbendazole regimen, whereas moxidectin had intact larvicidal efficacy in both studies.[2]

Based on AAEP guidelines, moxidectin remains effective against small strongyles, and the deworming option experts recommend.

Give your horse highly effective parasite control

Moxidectin, the active ingredient exclusive to QUEST® Gel and QUEST® PLUS Gel in the United States, is the treatment of choice for treating small strongyles. QUEST Gel is the only dewormer approved by the U.S. Food and Drug Administration to control encysted stages of small strongyles, large strongyles, pinworms, bots (and other labeled parasites) in a single dose, making it the optimal treatment option for deworming. It also can suppress small strongyle eggs for 90 days, making it a powerful choice for parasite control.[3]

Deworm like the experts

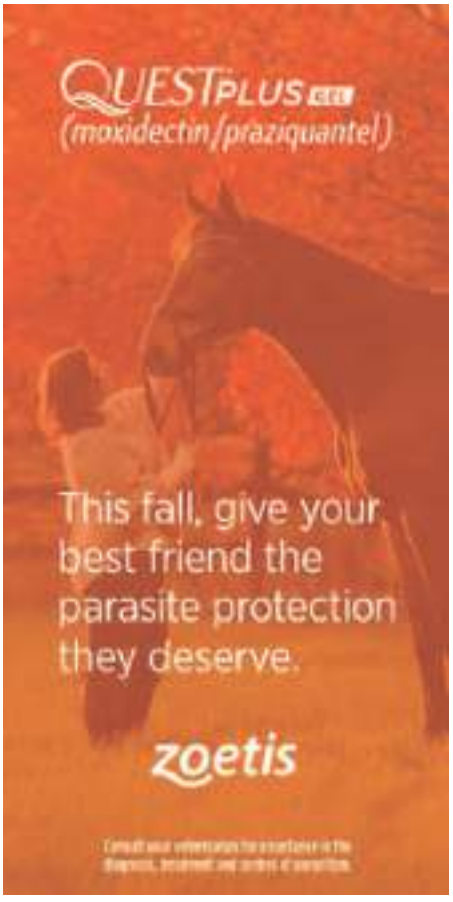
To minimize parasite resistance and maximize results against small strongyles, tapeworms, and other parasites, every adult horse should be dewormed in the spring, at the beginning of grazing season in your region, and in late fall/early winter, toward the end of grazing season in your region. One or both of these treatments should target the encysted form of small strongyles, and the fall treatment should also target tapeworms.

While this twice-annual deworming is the minimum that parasite experts recommend for all adult horses, it's important to also have your veterinarian conduct a fecal egg count (FEC) test on each horse in your care at least once per year. This FEC will identify horses in your herd that are "high parasite egg shedders" and may need a third, and possibly fourth, deworming treatment for small strongyles over the course of the year.

Give your best friend the parasite protection he deserves by using QUEST Gel in the spring and QUEST PLUS Gel in the fall. Both products are the only option that provides moxidectin – the active ingredient that equine parasite experts recommend. This valuable and effective deworming solution, along with these deworming protocols, provides your horses with the protection they need from the most concerning parasites.

Consult your veterinarian for assistance in the diagnosis, treatment, and control of parasitism

Do not use QUEST Gel or QUEST PLUS Gel in foals less than 6 months of age or in sick, debilitated and underweight horses. Do not use in other animal species, as severe adverse reactions, including fatalities in dogs, may result.



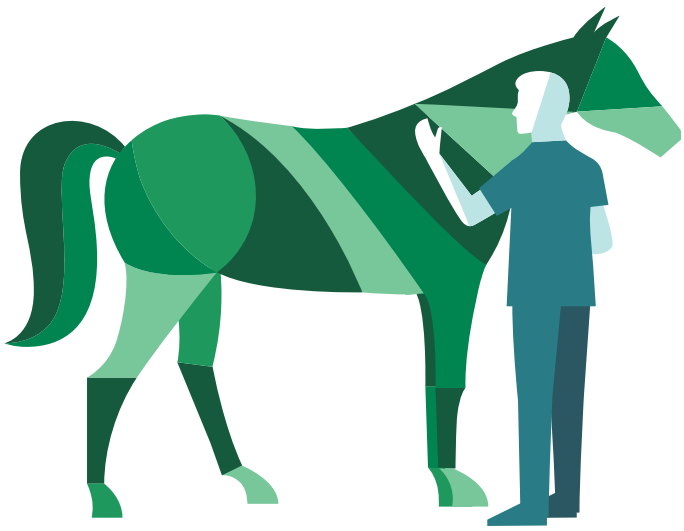
[1] American Association of Equine Practitioners. Parasite Control Guidelines. https://aaep.org/guidelines/parasite-control-guidelines. Accessed May 20, 2020.

[2] Reinemeyer et al., 2015; Bellaw et al.,2018. Accessed May 20, 2020.

[3] Mason ME, Voris ND, Ortis HA, Geeding AA, Kaplan RM. Comparison of a Single Dose of Moxidectin and a Five-Day Course of Fenbendazole to Reduce and Suppress Cyathostomin Fecal Egg Counts in a Herd of Embryo Transfer-Recipient Mares. J Am Vet Med Assoc. 2014;245(8):944-951.*

stablelab

Stablelab detects infections with 30 times greater sensitivity than a thermometer.[1]



Stablelab is a hand held device that measures Serum Amyloid A, a biomarker of infection, and provides results in 10 minutes stall side.

Detect

Detect and measure infection

Monitor

Monitor response to treatment

Screen

Implement protocols to catch problems early

Incorporate Stablelab into your routine clinical exams in cases such as:

- Ascending placentitis
- ADR
- Cellulitis
- Colic
- Critical care
- Diarrhea
- EIPH
- General infections
- Infectious disease
- Joint sepsis/flare
- New foal exam
- Fever of unknown region
- Maladjusted foal
- Metritis
- NICU
- Peritonitis
- Pneumonia
- Poor performance
- Postoperative follow up
- Postpartum
- Premature foal
- Preoperative screening
- Respiratory disease
- Rhodococcus equi
- Rotavirus
- Shipping fever
- Strangles
- Viral infections
- Umbilical infection

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[1] Oertly. et al. The accuracy of Serum Amyloid A in determining early inflammation in horses following long-distance transportation by air. AAEP Proceedings, 2017 460-461.

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