



Aurora Pharmaceutical, Inc.  
Innovative Products Backed  
by Exceptional Service

Volume 4 Issue 3

# Business essentials



## Business Essentials Inside

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**Bob Rehurek,**  
Director of Sales and Marketing  
Aurora Pharmaceutical, Inc.

**Aurora**, like most manufacturers, is dealing with supply chain slowdowns, price increases and delays in manufactured goods. Where Aurora is unlike a lot of vendors is how we have managed those supply issues before – and during – Covid.

We have diversified our suppliers. Whenever possible, it helps to have multiple manufacturers/suppliers working to keep inventory levels high. This helps to ensure that supply chain disruptions at one manufacturer don't leave us high and dry, since we'll have an alternate to work with. Plus, if demand is especially high, being able to stock from two sources means fulfilling orders that much faster.

We have also invested in buying large quantities of bulk ingredients and added over 100,000 sq ft of warehousing space to store product, so we can avoid backorder issues. This increased stocking capacity requires a large commitment of cash to assure our supply chain is not disrupted during times like this. However, it has also allowed us to grow at an impressive 20–30% rate over the past several years.

contract vendors and the Clubs are scurrying to locate additional product sourcing, oftentimes at much higher prices because the vendors know it is a short-term buy. Purchasing from a single source has proven to be expensive in this time of chain disruption.

I constantly tell veterinarians to never underestimate their clinic's buying power and growth potential. Make sure and develop purchasing agreements with multiple sources that compete against each other for your business. We all want your business, and most are willing to work with you to make sure you have the product you need most.

Additionally, clinics should be requesting that vendors commit inventory to their clinic/customers in the form of delayed shipping and billing. This helps eliminate backorder issues and assures your clinic/customers are always supplied with the most needed products and your clinic does not have the high cost of inventory or inventory management.

We welcome clinics setting up delayed shipments. It allows us better forecast manufacturing and to make sure

## MANAGING SUPPLY CHAIN CHALLENGES


Because of this commitment, our distributors and veterinary customers have seen a continued on-time supply of products while other companies are backordered or completely out. The fact that Aurora manufactures all our products in Minnesota has allowed us to keep products on our distributors' (and your) shelves. We aren't at the mercy of foreign shutdowns, skyrocketing tariffs and products sitting offshore while trucks and drivers are in limited supply.

What can your clinic glean from this pandemic-related supply chain fiasco? Make sure your business is in the most competitive bargaining and buying position possible.

For example, while we all want the best products at the best prices, joining Buying Groups has its pitfalls, especially when the supply chain is disrupted. Many Buying Clubs (and their veterinary members) are paying the high price of limited

your clinic's products are priority packaged and shipped on time to your distributors for on-time delivery to your customers or clinic. It also puts your clinic in a priority status with both the distributor and vendor because they know their products are moving on a scheduled timeline. It makes it easier for us to procure ingredients, solidify our inventory and make sure your clinic is a priority.

And finally, we are all aware of the reduced workforce issues facing many companies. If the pandemic has shown business anything, it's shown that where you run a company (or practice) that takes advantage and exploits employees, they are seeking employment where they are more rewarded for their loyalty and skills.

Now is the time to make sure your employees are assured performance bonus for great work. It's also time to improve benefits and cost-of-living compensation to keep good employees. Sometimes just letting your employees share and understand the company (or clinic's) financial health is all you need. Most employees want the business (and themselves) to be successful. Business health transparency – and sharing the wealth when it's available – is a good start. 



# New 'Leash' on Life Program Brings Shelter Dogs and Inmates Together



Brooke



Rachel



Mars

The Humane Society of Valdosta, GA, has found a way to give dogs and Hamilton Correctional Institution inmates a new meaning on life. The program is the brainchild of Hamilton Correctional Institute (Jasper, FL) Warden Randal Polk, and this experience is changing how these inmates see their lives.

According to Tori Grindle, lead dog handler with the Humane Society of Valdosta Lowndes County, "Hamilton Hounds' New Leash on Life Program was created to give dogs that were labeled un-adoptable a chance to find a home. In kind, inmates are learning dog training skills along with receiving emotional support."

Grindle recalls her first meeting with the handlers. "The very first day I spoke to the inmates – who are selected after undergoing a rigorous evaluation process – I informed them they were indeed doing a pretty incredible thing that would actually save these dogs' lives," recalls Grindle. "I had one of the inmates tell me that the program was actually saving their lives and like the dogs, it was giving them a second chance at life."

The inmates teach a 10-week program to get the dogs in shape for adoption. Besides teaching the dogs specific commands, behavioral techniques and social skills, inmates are also in charge of administering any needed medical treatments like deworming products.

"After discussing the benefits with Mika Read, the Aurora sales and marketing rep, we chose Revolt® (selamectin) because of its economics, range of activity and ease of administration," says Grindle. "We were just overwhelmed giving tablets and staying up on dosage sizing, timing, etc. for the 200-300 various sized dogs we care for. Since the inmate handlers are also responsible for taking care of

the health of the animal during their 10-week program, they can easily administer Revolt. We're excited about the ease of handling, the simplicity of the treatment and the product's broad activity range."

Once the program is finished, the dogs will graduate, hopefully, find a home, and a new set of dogs will arrive to be trained. On

top of that, the inmates are receiving job training as they become certified trainers once the program is finished, graduating alongside the dogs.

In conclusion Grindle says, "Training the dogs brought on a paternal feeling. From sunup to sundown, the inmate

trainers fed the dogs, gave them love and attention. The dogs were treated like family until night when it was time to snuggle up together for sleep. It was humanizing. It was needed. It was rehabilitating."

**a**



Tori Grindle



Savannah

Photos courtesy of Mika Read Photography.





**M**onty McInturff, DVM, (Auburn, '89) is owner and managing partner at Tennessee Equine Hospital (TEH), a multidisciplinary practice with a focus on performance-horse medicine located in Thompson's Station, TN. He joined TEH in 1991 and has since helped grow it into a state-of-the-art diagnostics facility with a full-care equine hospital and ambulatory service with three satellite hospitals — one north of Nashville, one near Memphis in Arlington, TN, and one they partner with in the Harvest/Madison area of Alabama. These satellite facilities have nine vets and three interns and are focused on providing emergency services for the horse 24/7/365.

Dr. McInturff, a self-proclaimed "small, country equine doctor," has quietly built TEH into one of the premiere equine businesses in the country with 20 full-time veterinarians focused specifically on sports medicine and maintenance of the equine athlete and three veterinarians dedicated to small animal customers. They have one goal in common — they all work in "teams" that share accounts and responsibilities, so each of them can better enjoy practicing a high level of equine medicine while maintaining a strong personal life. Something most large animal practices have talked about, but not accomplished.

"We're finding that in the equine practice world it's tough to find a good work/life balance," observes Dr. McInturff. "Our answer? In the equine (and other large animal practice) industry, we've always thought it was about us and our personal relationships with clients. However, when we share

those relationships with other vets, we see less workload on our senior veterinarians and happier clients who have a 'team' working for them that can be reached 24/7. It releases the full client responsibility from our veterinarians and allows them more time with family, hobbies and less burnout. That's what we're trying to accomplish in this practice."

According to Dr. McInturff there are steps you can take to be happier in your work in the veterinary industry. "Veterinary medicine is highly technical and requires all of us to be at the top of our games," outlines Dr. McInturff. "Many times, we feel like jugglers in the circus dealing with clients, patients and needy colleagues. Add to the equation dealing with family issues and other relationships — both at work and in our personal lives — this can be exhausting and lead to fatigue and even burnout."

According to the veterinarian, the keys to success lie in our hearts, not in our heads, and he would argue that one of the most important feelings is happiness. According to Dr. McInturff, it all starts with life balance.

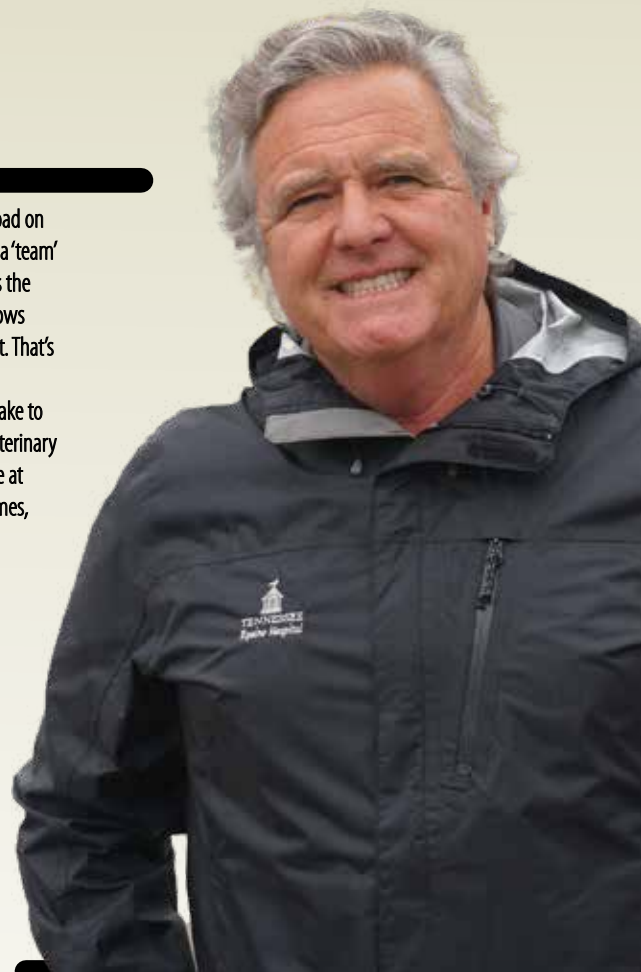
"We all know that growth takes work," states Dr. McInturff. "In our organization, the reality is that when one teammate is gone on vacation for 'balancing,' that means the rest of the team must work harder to pick up the slack. So, if this is true, the people on vacation are happy and those at work are a little grumpy because they have more work . . . unless they love what they do! Keeping a positive attitude and being willing to cross-train allows for the team to continue to flow when some teammates are away. We keep our staff from putting themselves in a box and challenge them to play roles that they would not normally do. This allows them to grow and stretch at work

until it's their time to 'balance.'"

According to the equine veterinarian, "The opposite of happiness is frustration. If we can manage this emotion, we will be more likely to be happy," he adds. "Frustration is a feeling we deal with all the time when our expectations are not met. It really takes happiness to a new low and affects our speech, our body language and our work performance. I would argue that frustration is a large time consumer of our days. It can lead to sadness, anger and discontent, which

## ACCORDING TO DR. MCINTURFF, THERE ARE FOUR MAIN AREAS OF OUR DAY:

- ⇒ THINGS WE LOVE TO DO AND DO WELL.
- ⇒ THINGS WE LOVE TO DO AND DON'T DO WELL.
- ⇒ THINGS WE HATE TO DO AND DO WELL.
- ⇒ THINGS WE HATE TO DO AND DO NOT DO WELL.





# BALANCE

Monty McInturff, DVM



"HAPPINESS LIES NOT IN THE MERE POSSESSION OF MONEY, IT LIES IN THE JOY OF ACHIEVEMENT, IN THE THRILL OF CREATIVE EFFORT."

— FRANKLIN D. ROOSEVELT

CAN HELP

# BALANCE

## A PERSONAL LIFE

affects everyone around us. To stay happy at work, you must manage frustration.

That starts with 'honestly' managing your workday.

"We all like to do things that we do well and work to have those opportunities," states Dr. McInturff.

"There is not a problem with that, and we should be doing those tasks. The second area is things we love to do and don't do

well. These are the things we work at that can make us — and those around us — frustrated. The way to handle those is to seek mentors or simply ask for more training. Being humble in those situations can make you and the team happy."

"Now for the difficult two," he continues. "There are those things we hate to do and do well, and they are typically what everyone else asks us to do because we can. We are not happy doing them, but we do them anyway, and our happiness at work drops. What if we came up with an easier

solution and/or added in technology to improve the task? Then those 'hate to do' tasks could become 'like to do' tasks (or at least an easier, less time-consuming task) and our happiness improves."

"Finally," he adds, "the dreaded 'things I hate to do and don't do well.' Those make us unhappy and can make the workday miserable. There is only one way to happiness in those situations, which is to outsource the job or simply explain you cannot do this task well. Your unhappiness is not worth the work, and you aren't doing it well anyway. Honestly, understanding your skills and trying to get better will make the workday a happy day."

Dr. McInturff believes a happy career in veterinary medicine also depends on the understanding of your S curve.<sup>1</sup>

"We might argue that money is our driver, but research shows differently," outlines Dr. McInturff. "The experts have said that 84% of people feel trapped in their roles. We all need money, but what we long for is growth. Just like when a plant stops growing it begins to die, the same is true for our careers."


Dr. McInturff outlines there are certain changes that must occur in our work lives that keep us engaged and happy.

"All of us start at the bottom of the S in the 'learning phase,'

which can last six months to a year. This is a time we are excited for a new adventure, and we are focused on learning how to be competent at our tasks. The middle section is the 'sweet spot of competence.' This is a productive and innovative time where we are the most engaged and happy with what we do. This can last from one to three years and is a wonderful, happy time at work," he states.

"The third phase of our work life is the 'mastery phase.'

This is the time in our careers we are all working toward when we are at the top of our game," Dr. McInturff adds. "It's a time when we can mentor others by coaching and training those around us. There is a lot of happiness in sharing what we know and have learned. The thing to watch out for is a feeling of entitlement. For example, this is how I do it here, or that's not my job. They are guarding against change and protecting their space only to find out they will become disinterested and even bored with their job without challenge."

In conclusion Dr. McInturff challenges, "Happiness takes work and can bear fruit in many ways. Look at yourself and see where you might try one or two of these tips to elevate your game. Veterinary medicine is a wonderful career, and you can make a difference with a positive approach to growth." 

<sup>1</sup>Build an A Team, Whitney Johnson



**W**hen Doug Groth, DVM (ISU, '97) graduated from veterinary school, he worked four years as a swine veterinarian/consultant in northeast Iowa before joining Schering-Plough as a Manager, Technical Services Veterinarian — a role that is usually reserved for a seasoned veterinarian. However, S-P was looking for someone who not only had a good working knowledge of pigs, but someone in the midwest to support veterinarians and producers but also with the energy to oversee the global launch of their first mycoplasma hyopneumoniae bacterin. But according to Dr. Groth, after working in the corporate sector for three years, something was missing.

"While I enjoyed the challenge, I really wanted to work directly with pork producers and be more expansive in my career than just vaccines." That's when he decided to join the already successful Carthage Veterinary Service (CVS) and Dr. Joseph Connor's team of swine specific veterinarians and consultants. Celebrating 18 years at CVS, Dr. Groth has become one of the most respected and client-requested veterinarians in the industry.

However, Dr. Groth adds, "Being on the commercial side of the industry was a valuable learning experience. I got to see the steps necessary to bring products to the market, the extent of research required by FDA and work with a marketing team to position, price, support and market a product. The experience has been highly valuable in our practice as we continue to work with industry vendors and manufacturers."

Dr. Groth spends a lot of time with both clinics' main businesses — Carthage Veterinary Services (CVS) and Professional Swine Management (PSM). "The PSM side of our business (or Carthage System as it is often called) has existed since 2001," outlines Dr. Groth. "It involves the full management of a swine system from financials to pig flows to feed, logistics, HR for managing sow units under our care, etc. This has allowed us to specialize in larger 5,000–6,000 head sow farms across six states. We have a lot of producer/owners who are getting out of the sow business but are still set up to finish 10,000–20,000 head of finishers. We manage the sow side of the business and keep high-quality pigs flowing through their finishing systems. They are taking full advantage of a large sow farm without the oversight, management and cash outlay."

The mission of CVS is to make sure producers have the tools and resources to remain competitive and viable in the industry. To that end, Dr. Groth oversees the system's five boar studs (approximately 1,800 head) that provide up-to-date genetics to the system's sow farms and customer base. "This allows us to provide all our growers with the best, most current genetics on the market. They receive the best genetics without the expense of managing genetic traits and animals."

While Dr. Groth spends the bulk of his week in the boar stud facilities, he is also responsible for overseeing and managing Modern Pork Partnerships, LLC — the clinic's vendor supply business. "We work closely with major vendors to negotiate the best prices for our customers," outlines Dr. Groth. "Being one of the largest swine production systems in the country affords us the benefits of contracting the best prices from vendors on all our pharmaceuticals, vaccines, feed additives, animal handling supplies, etc. This vendor relationship has allowed us to expand our services to offer customers one-day shipping, on-line instant ordering and the best prices available."

Established in 1980, Carthage Veterinary Service, Ltd. (CVS) provides consulting to independent swine producers and production systems throughout the United States, the Americas and Asia. With 13 veterinarians and a multi-discipline support staff, CVS provides outstanding veterinary service by combining science with health and production and a commitment to continuous improvement.

"CVS has a strong foundation of experience to provide a multitude of services domestically and internationally," says Dr. Groth. CVS not only services the PSM or Carthage System side of the business from a health and wellness standpoint, but they also have outside clients that are not associated with the Carthage System.

"We do everything for these hog producers from health management, vaccination and health consulting, etc. We also do a lot of international work (when travel restrictions aren't in place). We have extensive project work in China, Mexico, Thailand, Europe and Japan. We also leverage our relationship with CVS veterinarian Attila Farkas, DVM (2006 University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca) in Romania working with Pork Checkoff dollars looking at AFS spread and diagnostic preventive tools. There's a lot of virtual meetings going on right now, but our goal is to have feet on the ground in various countries once the travel restrictions are lifted," states Dr. Groth.

Research has always been at the heart of CVS and PSM. "We do a lot of production practice research," says Dr. Groth. "We have a dedicated staff that conducts research throughout the year on



Doug Groth, DVM

issues our veterinarians are running into, or customers are concerned about. We have a 6,000-head sow unit in our customer base that allows us to conduct genetics, feed or housing-specific projects to stay ahead of the production curve. We have multiple wean-to-finish facilities for feeding research, gestation-to-lactation studies, health issues and a BL2 level facility that can handle some pathogens and health study research. Contract research is also done in the facilities and are usually proprietary studies for vaccines, etc."

In conclusion, Dr. Groth states, "Every day is a different challenge and I like that aspect of veterinary medicine. What really invigorates me is helping young vets navigate swine medicine and production. I specifically enjoy teaching them how to communicate with customers. In our business we must be able to communicate at a high level and at a level farm employees can understand and implement. That's critical for our continued success." **a**





## Swine-Specific Veterinary Practice Continues Growth Via Client Services and State-of-the-Industry Production Management

### Learning Center

The CVS practice has an active research division, Carthage Innovative Swine Solutions (CISS), which has published findings from health and nutrition trials that are implemented throughout the industry today. Their investment in quality educational facilities enables them to provide excellent training itineraries with on and off-farm experiences for learners at their Carthage Learning and Development Center (CLDC).

Their classroom training is right next to a demo facility that features current swine products and equipment. Always aware of biosecurity issues, pigs are absent in the training facility. This allows domestic or international learners to become familiar with a barn design, understand how the equipment is used and familiarize themselves with the environment without direct livestock exposure that could increase their return down time.





# Diagnostic Expertise

## Keeps Turkey-Specific Clinic in Growing Demand

"The bulk of the products used in turkeys are labeled for chickens, however, turkeys have their own unique diseases and health issues," shares Hans Koehn, DVM (ISU '00), Koehn & Feldman DVM, in Jewell, IA.

"This practice has a lot of history," says Dr. Koehn. "It actually goes back to the early 1950s when Cliff Nelson, DVM (ISU, '39) a WWII veteran opened the clinic to service turkey producers in north-central Iowa. The business started as a veterinary clinic before evolving into a federally-licensed vaccine production facility in the mid-1980s."

As the growers in the area started to expand, they formed a co-op and bought West Liberty Foods to process their turkeys. That's when Dr. Koehn saw the need for a turkey-specific veterinary clinic devoted to diagnostic and problem-solving veterinary medicine. He immediately brought his focus on modern diagnostic tools and tests that specialize in serology, cultures, DNA analysis and newer molecular diagnostic testing.

"Since the turkey industry is not viewed by big pharma as being a profitable business model, it only made sense to our clinic founders to provide a vaccine solution to many of these problems. That's when they formed ARKO Laboratories to service their poultry clients. As veterinarians, this service allowed them to react quickly to issues they confirmed via early diagnostics."

Since then, ARKO Laboratories has been developing and manufacturing industry-leading swine

and turkey vaccines for commercial use. "Our goal in producing vaccines is to provide a product that is easily administered through an emphasis on oral/waterline delivery," outlines Dr. Koehn.

"We concentrate on modified live products that stimulate all areas of the immune system for greater protection against diseases and emphasize vaccines that are potentially important in food safety (such as our *Salmonella* and *E. coli* products). A good example of this vaccine technology is our H.E. Vac (prevention of secondary *E. coli* infections due to immunosuppression by the hemorrhagic enteritis virus), licensed in 1988, and has been administered successfully to over one billion turkeys."

Dr. Koehn adds, "We've been developing and marketing swine vaccines since 1993 with this same development and water-administered philosophy. It has allowed us to produce Nitro-Ileitis FF with the longest duration of immunity

for a waterline delivered ileitis vaccine. It's critical, that we deliver as many products as possible via the water to help eliminate animal welfare and safety issues. We see a problem, determine the cause via diagnostics, and are able to produce a vaccine (or autogenous flock-specific vaccine) that stops that problem quickly. This is a major benefit of having a licensed vaccine company tied to the clinic."

According to Dr. Koehn, the practice has always focused on science. "We try and stay well ahead of the curve with the most up-to-date testing, procedures and techniques available to us. That's what separates us from other poultry-specific veterinary clinics. We work closely with the ISU diagnostic lab, as well as other vets in our industry, to see what's happening to the entire industry and try to apply those answers locally to ward off the next issue."

Dr. Koehn adds, "The genetics are changing so rapidly, we're not





**Fun Fact:** Over 230 million turkeys are produced in the U.S. every year, with 46 million turkeys eaten each Thanksgiving, 22 million on Christmas, and 19 million at Easter. The not so fun fact is the turkey business is an industry that is grossly undervalued by big pharma regarding effective biologicals and pharmaceuticals.



raising the same animal we did even 20 years ago. These animals are developing immune systems that are much different than birds in the past. We used to have an animal that grows to 30 lbs. in 18 weeks replaced with an animal that grows to 50 lbs. in 18-20 weeks – something must give, and oftentimes it is immunity, disease resistance, etc. The animal is constantly evolving and so are we, in how we look at the growth, health, etc. We have certainly seen these new genetics becoming more susceptible to diseases that used to be a non-issue. That's why we are focused on molecular biology and diagnostic tools to help us recognize these rapid changes and hopefully provide a solution."

Another area Dr. Koehnke deals with daily is antibiotic resistance issues. "As drugs become obsolete


or the big companies stop making them, we are put in a position where we are looking for alternatives to keep disease issues and stress-related illness to a minimum.

"That's where partnering with Aurora Pharmaceutical has paid huge dividends for us and our turkey clients. We are constantly running sensitivities and finding that a lot of our normal products just aren't working, or we simply can't purchase them any longer. Aurora's veterinarian-driven management team seems to be able to provide products that help resolve stress issues and help us augment antibiotic products quickly.

"It's great to have a company focused on bringing some of these hard-to-get or obsolete products back at a great price point. And the fact that we don't worry about

product availability with Aurora is that much better. They are focused on making sure they provide us with products and not worry about backorders or shortages. Not too many companies can claim that."

In conclusion, Dr. Koehnke says the clinic's continued success is directly linked to their tenure in the turkey industry. "We have a lot of perspective that benefits our growers. Having a history of the disease in our area helps us keep preventive and treatment options simple and cost-effective to our growers.

"We've seen that some products work, and some don't at all. There's a lesson to be learned there and we try and pass that perspective and experience on to the next generation of grower. No sense in financially suffering issues of the past, he says." 





# Nearly Seven Decades of Veterinary Experience Sets Littleton Equine Medical Center Apart from Many Equine-Specific Practices

**G.** Marvin Beeman, DVM (CSU '57), Charles Vail, DVM, (CSU '60) and Terry Swanson, DVM (CSU, '67) all had similar starts as veterinarians. They graduated one day and a few days later were working at what was then called Littleton Large Animal Clinic (LLAC) in the southern Denver suburb of Littleton, CO.

Fast forward six decades and all three have contributed to organized veterinary medicine, including serving as Presidents of the AAEP and CVMA in addition to a multitude of other related activities. Today, you can still see all three of them making their rounds in the equine-exclusive practice now called Littleton Equine Medical Center (LEMC).

While they've cut back their hours, their energy keeps LEMC growing as one of the elite equine practices in the country.





"I took the position in Littleton in 1957 because I wanted to be close to my father's (George) operation," recalls Dr. Beeman. "He was a professional huntsman for a pack of English fox hounds, and I wanted to help manage the care of the 100+ horses. Dr. Harry Johnson was his veterinarian. He had established LLAC and was the first veterinarian we had ever heard of that used a stomach tube to administer anthelmintics. My father's passion provided me with the opportunity to have plenty of experience with a stomach tube. Three days after I graduated from veterinary college, Dr. Johnson sent me to administer anthelmintics via the stomach tube to 30 Quarter horse yearlings."

Dr. Charles Vail hails from a Colorado legacy. The famous Vail ski area was founded by Pete Seibert and local rancher Earl Eaton in 1962, at the base of Vail Pass. The pass was named after Dr. Vail's grandfather, Charles Vail, the highway engineer who routed U.S. Highway 6 through the Eagle Valley in 1940, which eventually became Interstate 70. Vail, the project's engineer, lent his name to the road – the Vail Pass – and eventually to the town of Vail.

"I graduated from veterinary school on



G. Marvin Beeman, DVM  
Colorado State University 1957



Three days after I graduated from veterinary college, Dr. Johnson sent me to administer anthelmintics via the stomach tube to 30 Quarter horse yearlings.

Dr. Swanson, the "pup" of the group, has been taking care of horses for 54 years. When his promised vet job in Idaho fell through the day before he graduated from veterinary school, he called Drs. Vail and Beeman and asked if they had hired an intern yet.

"As it happened, they had not, and offered the position to me," Dr. Swanson recalls. "After working with them

horses. As it turned out, I was able to head back the summer of 1968 to Littleton once the senior partner (Dr. Johnson) retired. I've been practicing here for 54 years. I never imagined a profession I would like better than this."



Dr. Swanson adds, "While I enjoyed the reproductive work, I had the opportunity to learn the lameness aspect of sports medicine at this practice. I have spent much of my career working with performance horses and lameness issues and had the privilege of learning about equine lameness from two of the foremost authorities – Drs. Beeman and Vail."

Now he works three days a week on lame horses and passes on his five decades of experience and knowledge to the younger veterinarians/interns in the practice.

"The people (clients and colleagues alike) I have the opportunity to work with keep me coming in every morning," Dr. Swanson notes. "I love working on their horses. Every lame horse has its own story. Trying to figure out the whole story behind the lameness and how we need to treat the horse is the challenge. I don't ever not want to go to work, and I don't ever not want to go home at the end of the day," he smiles. "Keep a nice balance

continued on next page



When I came on board, we were a cutting-edge clinic because we had a former military dental x-ray machine which allowed us to take field x-rays of horses.



Charles Vail, DVM  
Colorado State University 1960

June 4, 1960, and started in Littleton June 6," Dr. Vail recalls. "When I came on board, we were a cutting-edge clinic because we had a former military dental x-ray machine which allowed us to take field x-rays of horses. Now we're doing magnetic resonance imaging (MRI), radiographs, ultrasounds and shockwave therapy. What we know about looking at a blood sample now vs. when I was first in practice is almost stone age. It's beyond wow for us."

for most of the summer and fall, I left for a position at a broodmare farm in Ocala, FL. It proved to be an extremely valuable experience working on the stud farm and seeing first-hand the breeding procedures, foaling, etc.

"Reproduction was fairly simple in those days," he says. "All we had was plastic sleeves and a vaginal speculum. Our injectable of choice was oxytocin. There wasn't anything else available to treat



between work and home. You'll love your life much longer."

When Dr. Beeman became the practice CEO in 1968, he immediately initiated a Monday morning meeting. All three of the practice members met in a restaurant over breakfast. As the trio started expanding the practice, they quickly outgrew the restaurant and started meeting at the office, where they had built a conference room. Fast forward to 2021 and the practice's 21 veterinarians and interns are still meeting every Monday.

"We initially met so we could work out any issues regarding specific cases and if we needed to call in help," recalls Dr. Beeman. "We wanted everyone on the same page," adds Dr. Vail. "We wanted to eliminate the issues of a client saying, 'Dr. Beeman does it this way and you do it this way.' We were always on the same page and clients really appreciated that approach to their animals. We do this in our intern program as well. They all like being on the same page as the rest of the practice."

"A focused hour a week," adds Dr. Swanson, "is dedicated to the interns, and we discuss the clinic's approach to vaccination, colic, wound management, lameness, bandages, etc."

After 63 years in practice, Dr. Beeman stays involved with the practice daily.

"I appreciate the stimulation and conversations with the new veterinarians and interns coming into the practice," says



Dr. Beeman. "It's so rewarding to see the results of equine research ongoing today and the wonderful answers being brought to the industry by the research community. It's so exciting to be an equine practitioner today because we have so many



**“Every lame horse has its own story. Trying to figure out the whole story behind the lameness and how we need to treat the horse is the challenge.**

**Terry Swanson, DVM  
Colorado State University 1967**

answers and solutions to problems, we could only put a bandage on just 20 years ago. When I started, we didn't know that much about DNA and how that impacted a horse. There was no true AI or embryo transfers. That's why I'm still excited about this industry. The innovations happening daily are so amazing and provide answers to problems we had no idea about the cause."

Dr. Vail adds, "The explosion of technology is almost a daily thing. New drugs, new treatment modalities, advancing diagnostics, etc. You must run as fast as you can to stay up with it all. Our clients certainly expect us to be up on the latest technologies and medications. We owe it to them and their horses to do so. Our clients are extremely intelligent, and we pride ourselves to be ahead of the curve in new modalities of treatment. It is an exciting time in veterinary medicine and it's quickly advancing every day. I find myself reading upwards of 2½ hours a week on new technologies. For me, it's just an exciting time to be a horse doctor."

However, Dr. Swanson injects that the new technology isn't always a good thing.

"I have come to believe that the veterinarian's mental health has not been enhanced with the new technology being offered. A professional person has a lot of unanswered questions every day, veterinarians included. That level of mental pressure is seldom seen by the client or even clinic staff. We used to be protected by the front desk. They would take the call and we would deal with it on our schedule. Not so today. We are taking calls 24/7. There's not much time to think about issues and then address them. Clients want answers now. That's a stress not many people see or realize. This is especially true with the younger veterinar-

ians who assume they must answer every

call in real-time. It's an industry issue that must be addressed as we are seeing too many good veterinarians burning out or leaving the profession."

Dr. Beeman adds, "I'm constantly impressed by Dr.

Kelly Tisher, LEMC President, and his ability to manage what the practice needs, where personnel need to focus and what's needed to sustain client growth and practice success. He, along with Dr. Scott Toppin, LEMC Vice President, have built a team of professionals totally devoted to the practice's well-being. They have all bought into the practice concept and maintain the mantra of keeping our clients happy and their animals healthy. It's an absolute pleasure working with the management team and their associates."

In conclusion, Kelly Tisher, DVM ('94 U of MN) sums up the trio's true value to the practice. "How thoroughly blessed this practice is to have the equine and veterinary knowledge of these three experts. While they remain extremely humble about what they've seen and done, they are regarded as some of the best equine veterinarians in the world. They're great mentors to our veterinary and support staff and have made working here an absolute pleasure. The core values they established some 70 years ago are still alive and well and practiced here every day." **a**





# A Brief Review of Common Treatments for Estrus Suppression

## Introduction

Estrus suppression is used and prescribed daily in equine practice for both behavioral reasons in training and performance horses and for reproductive purposes. There are two primary ways to accomplish this task, first by prolonging luteal function in the mare or second through administration of exogenous progesterone and synthetic analogues. The many techniques and compounds have varying efficacy in accomplishing this task.

time to initiate treatment. Also, to my knowledge, there has not been a study done reviewing efficacy of repeat treatments in mares that responded at least once.

## Exogenous Progesterone Supplementation

The gold standard for progesterone supplementation in mares is undoubtedly treatment with one of the FDA approved oral formulations of altrenogest like Altren®.

Through many years of research, it has been established

Another progesterone analog that seems to be in the press often is medroxyprogesterone acetate injectable. It has been used commonly for behavioral modification in performance horses of both sexes. However, it has been shown by McCue to not inhibit estrus in mares when administered to mares at an initial dose of 1600 mg with weekly doses of 400 mg. Also, it has been demonstrated by Dujovne and Conley that MPA induces no response from the equine progesterone receptor. For these reasons, it has been banned from most, if not all horse show and racing jurisdictions, because it cannot inhibit estrus, so its use is considered a performance modifying agent. MPA has also been associated with sudden deaths in performance horses which should be an obvious reason to discontinue its use.

In summary, there are a multitude of schemes for suppressing estrus in mares. From the intrauterine glass ball to long acting altrenogest injectables, most schemes are centered around cost savings and convenience and have varying degrees of efficacy. However, when reliable results are demanded, nothing has the long track record of performance like using one of the FDA approved oral altrenogest medications daily.

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**By: Matt Klotz, DVM,  
Equine Technical  
Services Veterinarian  
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## Prolonged Luteal Function

There are two methods used commonly to prolong luteal function in the mare, the implantation of an intrauterine glass ball or oxytocin therapy. The intrauterine glass ball is 35mm in diameter and placed in the lumen of the uterus within 24 hours of ovulation through the open cervix. In Dr. Nie's study from 2001, 5/12 mares (41.7%) experienced prolonged luteal function lasting an average of 88.8 days. The 35mm glass ball prevented spontaneous expulsion as documented in a previous study in which a 25mm ball was expelled by 50% of treated mares. In this study there was no damage to the uterus based on histopathology; however, the glass balls must be removed when the mares return to estrus or risk long term infertility and other complications.

For prolonging luteal function with oxytocin therapy, treatment is initiated on day 7 or 8 after ovulation and carried out to day 14. From Dr. Keith's study in 2013, it was found that 60 IU IM SID given on days 8-14 is the most reliable, suppressing estrus in 86% of mares. If successful, treated mares will have a prolonged luteal function for an average of 69 days. While this is an attractive option since oxytocin is inexpensive, there is a considerable expense in repeat ultrasounds to monitor for an accurate ovulation

that oral altrenogest given at the label dosage of 0.044 mg/kg once a day will reliably maintain pregnancy in 80% of progesterone deficient mares from either ovariectomy or luteolysis. Also, it has been established that when used in embryo recipient mares, it will extend the degree of donor-recipient synchrony and is conducive to pregnancy maintenance. While it appears to have few side effects on mares or a fetus, it is contraindicated in mares that have endometritis because of inhibiting uterine clearance. Personnel handling it must wear impermeable gloves to prevent personal exposure.

Another common practice today is the use of compounded injectable altrenogest formulations. Three of these formulations were evaluated in 2009 by Storer, *et al.* and found to reliably suppress estrus for 12 to 32 days. However, what practitioners must remember is that since these all come from compounding labs, there is NO certification of lot-to-lot consistency, stability or shelf life as there is with the oral products that are made under FDA approval. If there is a treatment failure with the compounded products, it must always be questioned if the formula was accurate. Also, unlike the oral forms that have a predictable return to estrus after discontinuation, the injectable forms exhibit a high variability in returning cyclicity.





# AMVC IS BUILDING A BUSINESS ON THE BELIEF OF DOING THE RIGHT THING

## FOR THEIR ANIMALS, CUSTOMERS AND COLLEAGUES

**I**n the early 1990s, the number of pre-dominately cow/calf and feed lot cattle farmers in western Iowa began to decrease in number. The owners of Aububon (IA) Veterinary Clinic – Drs. Mark Engle (ISU '80), Daryl Olsen, DVM (ISU '82) and Steve Schmitz, DVM (ISU, '87) had the foresight to recognize a need for swine management as the swine industry began its consolidation. In 1990, the vets in Audubon purchased a veterinary clinic in Manning, IA, and formed Audubon-Manning Veterinary Clinic or AMVC, LLC. Soon after that, they started managing their first finish site, a two barn, 2,000 pig finishing operation. Over time the number of sows and finishing spaces under management has continued to increase.

The partner's first step was to hire two swine-specific veterinarians – Bob Blomme, DVM (ISU '90) and Tom Ulrickson, DVM (ISU '79). Together they became the nucleus of what has become the ninth largest pork producer in the U.S.

Fast forward to 2021 and AMVC's vision was more than they originally dreamt. Now they have 23 veterinarians on staff and more than 700 employees overlooking a swine management presence in ten states, managing 149,000 sows and producing 1.6 million market hogs a year.

"Our goal has always been to keep the family on the farm," says Dr. Blomme. "This has been a niche market for us – building

and then managing sow farms for our farmers and large landowners who want to have an ownership stake in raising pigs without the financial or management side of keeping and managing the sow side of the equation. We work as a system to provide oversight for health, production and nutrition for independent producers," the swine practitioner adds.

"We provide the advantage of a system approach to pig production and let everybody maintain independence. This has allowed the second and third generation of farmers to take isowean pigs and finish them out without the high cost of managing sows."

AMVC's vision is to be an industry leader in livestock production by providing management, veterinary, nutritional, marketing and employee expertise that supports animal welfare, environmental stewardship, quality and traceability of meat products and the sustainability of livestock production.

Dr. Blomme adds, "We have a Veterinary Services Division with our original satellite office in Manning, IA, and have added an additional satellite clinic in Templeton, IA. Recently we added a swine-exclusive clinic in Frankfort, IN. We have an office in Great Bend, KS, that's helping with the multiplication side of the business as well. The AMVC campus on the north side of Aububon consists of the Veterinary Services facilities, Nutritional Services, a large products warehouse facility and a maintenance facility where the original



Bob Blomme, DVM







clinic once stood. We also have trucking cleanout/baking business that's more about biosecurity."

Dr. Blomme adds, "A lot of the integrators in the pork business are very production centric where we tend to be more focused on herd health, biosecurity, animal welfare, raising pigs without antibiotics, etc. vs. just production numbers. Since these animals are being managed by veterinarians, we focus on pig health, pig safety and pig welfare. Having good production people teamed up with veterinarians is the best of both worlds. We know the best decisions are being made to raise pigs safely and humanely. Our production numbers are showing that it's paying off for our pig owners."

Managing sows and pigs in multiple states requires an entirely different level of precision and expertise. For example, the AMVC team and AMVC nutritionist, Trey Kellner, MS, PhD (ISU '17), oversee around 500 diets that are distributed across 20 different feed mills within nine different states. AMVC Nutritional Services feeds pigs from the nursery stage all the way to sow lactation.

"We have always emphasized service to our clients," says Dr. Blomme. "It has been that way since we started in the pig management business. We are in front of our growers and their production teams every day. In some systems, veterinarians are looked at as a line item in the budget, often employed for their ability to provide a signature. There are a lot of production companies that simply don't seek out or utilize the talents of their in-house veterinarian. That's not the case in our system."

Handling problem operations is another niche Dr. Blomme says AMVC has excelled in. "We get calls from production companies, farm systems, etc. that just can't get ahead of the curve like they know they should," says Dr. Blomme. "Oftentimes they are having a health issue, their nutrition has broken down, employee training problems or financials aren't adding up. It may sound twisted," he smiles, "but we really like these types of calls because we know we have the experience to help a producer or production system out. We've been doing it for more than 20 years. We are committed to 'getting boots on the ground' with-

in hours if the situation calls for it. Our growth has been heavily influenced by working with comfortable clients and making them better. We don't chase down or take on every opportunity that comes to us. It must fit within our skill set and we must be able to provide help."

In conclusion Dr. Blomme says from the first day of forming AMVC, the focus of their

continued on page 20





# EQUINE DENT

## YOU MIGHT BE



**By: Bess Darrow, DVM**  
**Tune Ups Veterinary Equine Dentistry**  
**Williston, FL**

## STRAIGHT FROM THE HORSES' MOUTHS



**SO** last time, we talked about how to perform a basic equine dentistry exam. Now that you know how to examine the mouth, what might you find inside?

I like to play devil's advocate and consider certain situations where it seems logical that a dental problem might be present, but actually something ELSE is causing the issue.

I would assume that most equine or mixed practitioners perform oral exams on a semi-regular basis for many different reasons. Perhaps the horse is colicing, chewing its hay in an odd way, salivating excessively or tilting its head.

Maybe a formerly steadfast school horse is bolting and refusing to turn right, a Grand Prix jumper is suddenly stopping at the fences or a barrel horse can't turn accurately around the last barrel. What if the owner notices a lot of oat hulls or especially long pieces of fiber in a horse's manure or finds a tooth in its feed bucket?

Or finally, what if the horse has no appetite, experiences chronic weight loss, or drops most of its feed? It is important to get to the root cause of all these behaviors and starting in the mouth is a good idea! Additionally, horses are obviously examined all the time during pre-purchase exams and the status of the mouth and teeth should certainly be noted on the final report so that the new owner knows whether a dental is in order.

With all these possible physical and behavioral issues, it is important to consider what might be going on in a horse's mouth. However, I can tell you about the punchline at the beginning of the story!

The thin, nervous horse with a poor coat who drops every bit of grain out of its mouth typically has perfect teeth! It has something else going on. I find that a huge majority of horses with significant dental pathology have absolutely no clinical signs! I can almost assure you that the fat horse standing in the corner, minding his own business, licking his feed bowl clean, will be the one horse in the barn with major problems in his mouth!

And like I've said before, you miss more by not looking than by not knowing. You cannot just guess or put on your x-ray vision goggles to determine what is going on inside the oral cavity. You must do a thorough exam with a light and speculum to really see and evaluate.

The steps of a thorough oral exam were covered in the last article. I unfortunately so very often hear owners say that their vet came out to do routine vaccines and Coggins, but

when asked to check the teeth, they simply quickly stuck a finger into the horse's mouth and said, "Oh, he is fine for another year!"

So, as we've discussed before, even if you don't want to be the one to perform a dental, at least you can diagnose what's going on. For starters, please don't forget about the outside of the horse. Look for symmetry in the face. Are the eyes level, are the masseter muscles the same size, is there a bulge of the temporalis muscle on one side underneath the forelock, how about any signs of old fractures along the ventral mandible? A horse who has a ramp, hook or protuberant tooth, may have an inability to move his mandible equally in both directions.

When this happens, there's often an asymmetry in the musculature. Some horses have had head trauma with subsequent nerve damage where there is a complete absence of masseter muscle on one side. These patients have a difficult time opening their mouth for an exam. Horses who are blind in one eye often have a head tilt which causes uneven wear of their incisors. The posture of a horse can significantly affect the way its teeth occlude.

Also, note that often a horse will habitually stand with one front foot ahead of the other. It's not uncommon to notice a deviation of the mandible one way or another that corresponds with that foot placement.

There's a very complex relationship between the incisors, the molars, the TMJ and the balance centers of the inner ear. Not to mention, the cranial nerves also come out around the poll in the TMJ and upper neck. A lot of information is processed there.



Abnormal chewing might have more to do with pain in the TMJ than with a sharp tooth, for example. A horse who is "out" chiroprac-



# TISTRY 101

## SURPRISED BY WHAT YOU SEE INSIDE

tically in its poll may chew tentatively or gingerly and may drop a lot of food! One with overdeveloped muscles on one side may be biting its own cheek during mastication. There are many reasons that a foul odor and nasal discharge may be present. It's common to think that a tooth root abscess would be causing such a problem, but remember CHANG, (did you learn that one in vet school)? Cyst, hematoma, abscess, neoplasia, granuloma. There are a lot of things that can



in male horses and remember that a small percentage of mares will have tiny canines, but an even smaller percentage will have four fully developed canines! They can be slightly buffed so they are not so sharp and so they do not pinch the tongue. They usually accumulate a fair amount of tartar, which should be cleaned off. Further back in the mouth, check for wolf teeth. Many people confuse canine teeth with wolf teeth. They are as similar as apples and bananas, but people confuse them



So, knowing all the myriad of things a horse can have wrong inside its mouth, remember that many horses really, truly show no clinical signs. This doesn't mean that they do not need their issues to be taken care of or that they are pain free, it just highlights the fact that horses are amazingly stoic creatures! Also know that not all horses with behavior issues or odd habits have dental issues.

The number one complaint I hear from owners is that their horses drop their grain,



be up the nose, right?

When you lift the lip and look at the front teeth, make sure that the incisors are level, with the centers of the upper and lower arcades meeting correctly, meaning the mandible is not cocked over to one side or the other. Are the upper or lower incisors overgrown? This is commonly found in older horses. If their incisors are overgrown, it's more difficult for them to grind their food effectively because the molars do not have optimal occlusion. Is the horse a cribber with his upper incisors worn down too little nubs? Owners often panic about this, but these horses tend to do just fine. They use their lips to pull up the grass and somehow, they manage to move the food to the back of their mouths.

Check for extra or missing incisors. How about food stuck between their teeth causing small abscesses? It is important to notice if a horse has an overbite, or an underbite. If you are at a breeding operation and you run across a parrot mouth, it's probably worth mentioning to the owners that they should consider not breeding the same pair again, as one of the parents is passing along this undesirable trait.

Check for the sharpness of canine teeth

all the time. It is helpful for owners to know if their horses have wolf teeth so that they can be removed before the horse wears a bit.

Moving back to the cheek teeth, aside from the ever-present sharp enamel points along the upper buccal and lower lingual surfaces, you can check for extra molars, missing molars, or fractured teeth. Many horses have crooked arcades, where the teeth look like train cars on train tracks, with some of the cars derailed. When these teeth are crooked, they do not line up properly with their opposing partner teeth, and irregular wear patterns develop.


The conformation of a horse's head and its breed have a lot to do with the occlusion of the molars. For example, breeds with very wide foreheads and short faces from muzzle to poll, like Quarter horses, Arabians and minis, tend to have problems with overcrowding of their molars. Contrast them with horses with long faces, such as standardbreds, thoroughbreds and draft horses, who have plenty of room in their mouths for their teeth. I often see draft horses with extra molars in the back!

Having a good view into the mouth is important to see these irregular wear patterns and malocclusions such as hooks, ramps, waves, sheer mouths and smooth mouths.

and therefore they are sure that a dental issue is the problem. What I have observed over many years is that horses typically fall into one of two camps, those who drop grain and those who don't. The ones who drop grain typically are the "distracted eaters" who take too much food in one mouthful and swing their heads around to look at their surroundings, dropping food in the process.

Contrast that to the fat little pony who keeps his head in his bucket, eats every grain of grain, and never comes up for air. He probably also stands there for an hour and licks his bucket afterwards. He will not drop any grain! If a horse suddenly starts dropping food, then that's a different story.

Also, chronic weight loss, in my opinion, often doesn't correspond directly to dental issues. I'm not saying that you cannot help a horse greatly by floating its teeth, but there are just so many other issues that cause weight loss, like internal parasites, inadequate caloric intake, stomach ulcers, emotional stress, etc.

One thing is for sure, they will always keep you guessing! Happy looking! 





# Industry & Veterinary Research Quickly Team-Up To Answer Pressing PRRSV 144 Concerns

Dr. Scott Dee  
Pipestone Director of Research

This industry-wide feeling of panic surrounding the PRRSV 144 strain has left many practitioners and their swine clients looking for solutions and action plans. However, few, if any solid science exists. Based on field observations from practitioners and producers, PRRSV 144 is the worst strain of PRRSV ever. Additionally, questions whether vaccines will work against this strain and if biosecurity protocols are even effective any longer promoted Joel Nerem, DVM, Pipestone Chief Veterinary Officer, to quickly address the issues by saying, "Answering difficult questions with production-driven research for farmers and their veterinarians is in our wheelhouse. We need answers now, not a year from now."

This quickly led Dr. Scott Dee, Pipestone Director of Research and Pipestone Research team members Roy Edler and Dan Hanson to join forces with Dr. Amanda Sponheim, Dr. Reid Philips and Justin Rustvold from Boehringer Ingelheim Animal Health USA, Inc. (BI), to quickly develop and implement three studies targeting the field concerns, including:

## Is PRRSV 144 worse than PRRSV 174? Do vaccines still work on PRRSV 144? Can biosecurity protocols prevent PRRSV 144 introduction?

### Study 1: Pathogenicity, Is PRRSV 144 worse than PRRSV 174?

**Design:** Naïve pigs were challenged with either PRRSV 144 or PRRSV 174. Outcomes included Average Daily Gain (ADG), percent mortality, viral load, clinical scores, pyrexia, and number of treatment events.

**Results:** Across all metrics, PRRS 174 was more pathogenic than PRRSV 144.

### Study 2: Do vaccines still work on PRRSV 144?

**Design:** Pigs were vaccinated either with Ingelvac PRRS® MLV (BI) or Prevacent® PRRS (Elanco) and compared to a non-vaccinated control group. Vaccination was applied according to label instructions and challenge occurred 28-day post-vaccination.

**Results:** Both vaccines were effective against PRRSV 144 and performance in vaccinated groups was significantly better than non-vaccinates.

### Study 3: Can biosecurity protocols prevent PRRSV 144 introduction?

**Design:** Six biosecurity protocols were tested on pigs challenged with PRRSV 144. The study evaluated transmission of 144 through feed, using natural feeding behavior, transmission via contaminated personal and fomites (boots, coveralls, and hands), the ability of PRRSV 144 to be detected in aerosols from infected pigs, survival in slurry (14 vs 21 days), and whether the transport (feed truck) could serve as a vehicle for viral movement between sites. In addition, intervention strategies, including 2 disinfectants (Ag Forte Pro or Synergize®), 2 feed mitigants (Guardian™ or Sal CURB®), air filtration (Camfill Farr MERV 14) and a shower protocol with a boots/coverall change, were tested to determine if the respective risks could be managed.

#### Results:

**Disinfectants:** Ag Forte Pro and Synergize® neutralized PRRSV 144 after 60 minutes of contact.

**Contaminated feed:** PRRSV 144 was transmitted through feed via natural feeding behavior. Both feed mitigants (Guardian™ or Sal CURB®) prevented infection.

**Feed transport:** PRRSV 144 survived in the feed transport model and infected pigs.


**Survival in slurry:** PRRSV survived in slurry for 14 days, but not 21 days.

**Contaminated fomites/Shower in protocol:** Following 30 minutes of contact with infected pigs, PRRSV 144 was detected on hands, boots, and coveralls of personnel. In the absence of a shower and clothes/footwear change, virus was transmitted to contact controls. After a shower and clothes/footwear change, virus was not transmitted to contact controls.

**Filtration:** PRRSV RNA was detected in 28%-43% of interior air samples during the challenge period. In contrast, there was no detectable PRRSV 144 in exterior air samples post-filtration.

### Overall Observations

In summary, Dr. Dee states, "Under the conditions of this study, it appeared that PRRSV 174 was **more pathogenic** than PRRSV 144 and **modified live virus vaccines were effective** against PRRSV 144. In addition, standard protocols of biosecurity such as disinfection, showering, changing boots and coveralls between infected and non-infected populations are still effective. Aerosols and feed appear to be risk factors for PRRSV 144 spread, but risk is reduced through filtration and feed mitigation. Finally, the risk of contaminated transport (feed truck) continues to be a risk factor for viral movement between farms.

"You know what to do," concludes Dr. Dee. "Don't give up. We know the routes of transmission and how to manage these risks. Don't take shortcuts, keep using modified live virus vaccines according to label and don't relax." 

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By: Mike Strobel, DVM, MS,  
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25% in the last year and have received three new FDA generic approvals in 2021. This will allow us to continue to expand our offerings of high-quality, FDA-approved products both proprietary and generic. We can't do it without you.

I would like to tell everyone about all the things that are involved in the approval process for generic animal products. It is neither simple nor inexpensive. Although the individual product development path varies from product to product and costs vary. The regulatory fees all companies are required to pay FDA at the time of approval and during the approval process have been escalating significantly over the past 12 years.

There are several reasons for this and there are things you can do to help reduce the cost of generics we bring to market and increase the generic choices in the market.

Every five years the Animal Generic Drug User Fee Act comes up for renewal. The next renewal is in 2023. This act grants approval for the FDA to levy fees on Generic Animal Drug manufacturers. Those fees fall into three categories. They include an annual Sponsor Fee, annual approved product fees and individual new product approval Fees.

Taken together, the FDA is currently allowed to collect \$24 million dollars a year in fees. These fees are both fixed, and variable, based on the average approvals over the past five years, the number of active sponsors and the number of approved products.

They are currently allocated 40% from product approval fees, 40% from sponsor annual fees and 20% approved product annual fees. The other factor that affects the actual fee that drug companies pay is annual appropriations the FDA receives to support operations. Current appropriations are split 80% percent for proprietary drug support and 20% percent for generics. The human side of FDA is a 50/50 split and generic drugs would cost less to get approved if the same was true for generic animal drugs.

## FINAL THOUGHTS

I want to begin by thanking all our current customers for the support you have given to Aurora and its hard-working employees in 2021. As a result, we have grown

Since 2009, the fee a sponsor pays to FDA at the time of approval has increased from \$41,400.00 to \$548,628.00 today. This is being driven by virtually no growth in approvals annually during that time despite a more than 100% increase in the number of applications for generics. The whole purpose of the fees was to decrease the time to approval and make it more predictable. That has not occurred to date. Additionally, the current law allows the FDA to steadily increase the amount. The net result for the veterinary and customer community is fewer generic options and higher drug prices.

As a veterinarian, I want to deliver the best value to the customer I can. Part of that is reasonably-priced drugs that allow them to treat their animal or animals appropriately. I prefer approved drugs over compounded drugs because of the legality, confidence I can have in safety, efficacy and the required research that is behind approved products. Left unchecked, our profession and clients will be forced to use more and more substandard illegal compounded products or pay excessive prices for approved products where there is only a single choice in the market.

We experience this in 80+% of approved veterinary products today. In addition, there is no incentive for generic manufacturers to make small market generics under the current system.

I urge all veterinarians and your clients to tell your congressman/women and senators to support increased funding of FDA/CVM for animal generics. They are a great way to help your clients every day without giving up anything in terms of safety and efficacy.

Fees paid by manufacturers are appropriate to a point. However, at the current levels, they are forcing manufacturers to make choices that are not in the best interest of our customers. I can speak for Aurora and say that we will not even consider developing generics for 80% percent of the products in the market today because of the current AGDUFA fees and the size of the markets themselves. Unlike proprietary drugs, generics are designed to give our customers greater choices at a reduced cost. I think everyone should like that idea!

***All of us at Aurora are looking forward to 2022 and introducing you to several new generics.***





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**VISIBILITY LEADS TO COMMUNICATION.  
COMMUNICATION LEADS TO TRUST.  
TRUST LEADS TO LOYALTY.**

Winning the trust of stakeholders is a leader's greatest battle. A business leader establishes a common purpose, steers the organization towards shared goals by building trust with stakeholders. Trust is a profound force that enhances credibility, builds loyalty and makes communication effective. It plays a decisive role during times of change and stress. Trust lends the benefit of doubt in tough situations where one wants to be heard, understood and believed.

*Trust is crucial to our success."*

**Bob Blomme, DVM**

**Bob Blomme, DVM**

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business has been to simply do the right thing for their animals, customers and colleagues every day. "It's not hard to do when you work with, and for, people who share the same love of animals as

we do. Our clients are more like family, and we work hard for them every day. We are rewarded with their trust, and we never take that for granted." 