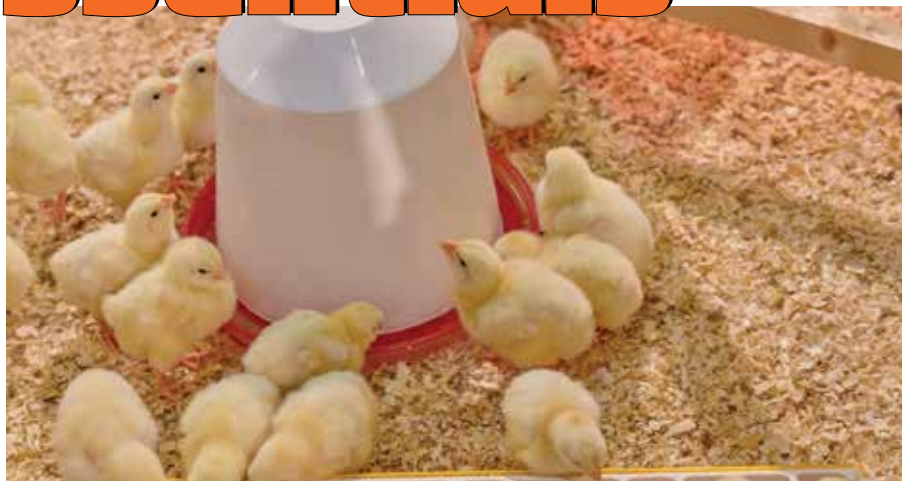
Volume 4 Issue 2

# dvm business essentials

Aurora Pharmaceutical, Inc.
Innovative Products Backed
by Exceptional Service

## Business Essentials Inside





aurora PHARMACEUTICAL®

# Maintaining And Growing Relationships with Clients

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

Locked doors, shorter business hours and the absence of one-on-one contact has many clients feeling forgotten. It falls on us all to let our customers know that we want (and need) them back; we have never truly left them; and that they are still important.

Some of the tried-and-true practices we (and others) implemented early in the pandemic to directly communicate with clients are even more effective post-pandemic. Some of the communication tools your clinic may implement include:

**In-house electronic newsletter**. You have your customers' contact information and they are waiting to hear from you. Developing a simple newsletter filled with clinic updates, recognizing birthdays and anniversaries of your clients, seasonal product promotional specials, news and industry information is easy to assemble and distribute. Make it "live" so clients can communicate directly with you with questions and comments.

**Annual or semiannual customer appreciation events.** It does not require a lot of staff time to set up and implement a client appreciation luncheon, BBQ or cookout. This allows one-on-one communication with your clients, gives them time to ask questions, meet staff and become "tied" to the practice.

**Quarterly seminars with vendor speakers.** Clients are always interested in new products, new technologies and new ways to manage their operations and livestock (or pets). Vendors are a great source of education and can even help offset expenses. Aurora has Technical Service Veterinarians at the ready to help educate and update customer's clients.

## Combatting On-Line Retailers

Another post-pandemic area of concern is the strengthening of on-line buying. It's no secret that the veterinary and distribution businesses have been under assault from online retailers for some time. Online retailers are always open and have access to lots of inventory. Whatever the customer is looking for is probably available – at an attractive price.

***But online retailers haven't found an effective way to ENGAGE with customers directly.*** It's difficult for online retailers to ask if customers are finding what they are looking for or how to use that product.

This limitation is where the veterinarian (and veterinary distributor) has an advantage. Offer your customers something the online retailers just don't have – real live people to direct them quickly to the product or service they need.

## A Good First Step

Knowing you have a real advantage is a big help, but there's more work to do. Everyone on your staff is probably more than willing to do their best to help customers where they can. That's good, but it won't be enough to give you an advantage over your online competitors. Give customers extra reasons to come to your clinic.

**Train Your Staff** – If customers come for advice about the products you sell and receive bad or inaccurate information, they won't be back. To prevent this from happening, invest in the training necessary to keep your staff on top of the latest trends and innovations in your industry. Your product and service vendors (like Aurora) can help facilitate training. Just give us a call and we'll be there to assist.

**Offer Services** – Services linked to the products you offer is a great way to get customers to your door. Not only will you profit by providing the needed services, but customers will also be able to see what other products and services you provide.

**Consider Offering Products or Services Unrelated to the Products You Sell** – Some veterinarians are thinking way outside the box. By simply providing a coffee or latte machine, popcorn kiosk or FREE snack area, clients feel special and come back for the experience.

**Loyalty Programs** –A rewards program gives you an opportunity to collect useful information about your customers. If you have their home and email address, use that information to contact them directly through snail mail or email. Offer these customers a coupon, a special discount on an upcoming sale or some other incentive. Want to stand out from your competitors? Snag your customer's birthdate and send them a card before the big day, with a handwritten greeting, to create an enduring memory.

## Change Is Good

Despite all the technology available to you today, the success of any clinic or practice will ultimately rest with the ability to build strong post-pandemic relationships with customers and by giving them a positive shopping experience each time they come to your clinic.


Valerie Coerver, DVM

# MOBILE VETERINARIAN
## MAKES BASIC PET CARE AFFORDABLE

Working in the snow and sub-zero weather quickly persuaded Oklahoma native Valerie Coerver, DVM (St. Matthew's U, '14, WA St, '15) she did not want to be a dairy veterinarian. As a matter of fact, the cold weather convinced her more than ever she wanted to return home to work on beef cattle – the reason she went to veterinary school in the first place.

After working in mixed animal medicine in rural parts of Oklahoma and central Texas for a few years, Dr. Coerver moved to Waco, TX, in early 2016 and worked with a small animal clinic that allowed her some spare time to start building her mobile veterinary business. It didn't take her long to realize there was untapped business potential in mobile veterinary medicine – especially dealing with small animals and ruminants.

She decided to take the venture to a full-time business in 2018 and is currently the first and only mobile veterinary business in Waco dedicated to small animals (but also sees beef cattle, equine and small ruminants).

"About 70% of my patients are dogs," says Dr. Coerver. "Owners like the fact that they can have a veterinarian make a house call because their animal is too big to get into a car or own an animal with anxiety or behavioral problems. A lot of clients just have hectic lives or multiple animals and love the fact that they can schedule a vet visit to assure quality care for their pet."

Dr. Coerver's care programs are based on preventative medicine. "I do a lot of annual exams, heartworm testing and vaccinations," she outlines. "I see a lot of senior animals, so I deal with a lot of pain management, nutrition and at-home euthanasia services. This type of service leads to highly loyal customers who rely on me to remind them of their pet's next preventative care treatments, vaccinations, etc., just like a brick and mortar clinic."

However, unlike many traditional clinics with large overhead, Dr. Coerver's overhead is kept to a minimum with only her truck, insurance and veterinary supplies. "I knew if I was going to offer an alternative to traditional in-clinic care, I needed to provide my services at a reasonable fee, however, offer considerable discounts on drugs and treatment supplies.

"A lot of clinics are outpricing themselves and that causes owners to reduce their preventive care. I have been able to pass along major savings to my clients by bringing on ge-

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# DESERT MOUNTAIN EQUINE BRINGS DIAGNOSTIC EXPERTISE TO ENHANCE PERFORMANCE LONGEVITY

When a promising baseball career was cut short due to an injury, Scott Meyer headed to Sheridan, WY, to help a friend work cattle. As it turned out, the local veterinary – now retired Lance Moxey, DVM (CSU, '71) – saw the talent and love for animals in Meyer and helped him move to the next level in education at his alma mater, Colorado State University.

"I decided to major in microbiology so I would have a better chance at getting into veterinary school," he recalls. "As it happened, I didn't get into the vet school after graduation, so I decided to get my masters in anatomy and neurobiology – again, to better my chances at getting into vet school. After teaching veterinary students anatomy for a year, I was accepted into vet school and graduated in 2004."

After graduation and externships in sports medicine and surgery in Southern Australia, Dr. Meyer returned home to Gilbert, AZ, (near Phoenix) to work with the predominantly dairy business in the area. "While I enjoyed working on dairy and beef cattle, I knew it wasn't what I eventually wanted to do. As chance would have it, I was introduced to a vet who was retiring from a racetrack practice in Southern California. I thought this would be a great chance to expand my knowledge of equine sports medicine and took a job with the practice. That changed everything for me. What I thought was going to be a one-year deal turned into 10 years. I had the opportunity to work on renowned trainer Bob Baffert's horses, including Triple Crown winner American Pharoah. I also met my wife (Julie), and we had two kids."

It became clear to Dr. Meyer that he needed to move back home and start his own equine practice. "The time seemed right. The horse population in the area was exploding and there just weren't enough veterinarians to take care of the growth. I started Desert Mountain Equine (Queen Creek, AZ) in my garage. I did a lot of ambulatory work and started growing my clientele rather quickly. That eventually allowed me to buy 10 acres and start building the practice of my dreams."

Instead of a garage, Dr. Meyer now practices in a new 2,300 sq. ft. equine-exclusive, haul-in facility where he focuses primarily on general equine medicine including sports medicine and lameness issues in horses. However, what

Scott Meyer, DVM

Dr. Meyer brought to the desert that has made his practice one of the best in the area, is his equine expertise.

"Technology and experience have allowed us to move from telling horse owners to retire or rest a horse to radical new therapies that get a horse back into competition quicker and more safely," outlines Dr. Meyer. "My years of experience in diagnostic medicine allow me to provide specialized comprehensive care for my elite equine athletes. I oftentimes utilize MRIs, digital radiography, ultrasound and nuclear scintigraphy to detect and treat lameness issues we only guessed at before. I can also utilize new regenerative medicines including stem cell, IRAP and PRP technology to get these animals back into pain-free competition. These new technologies have allowed us to keep animals in competition longer and more safely than ever before."

When it comes to health issues, Dr. Meyer says he never hesitates to stop those issues as quickly and as safely as possible. "A good example of this is my use of Equisul-SDT® (Sulfadiazine/Trimethoprim). I reach for Equisul-SDT more today than I used to," he outlines. "For years I used Uniprim® and SMZ tablets, but I knew they didn't work. Oftentimes I was prescribing these medicines because it was all I could get my hands on. But once I started using Equisul, I could actually see results I never saw with the other products."

Dr. Meyer likes that both he and his clients can see infections go away quickly. "I rarely used sulfa drugs. You would always see the 'resistant' code on the diagnostic reports. However, this product is different. I can see infections clear up and go away. Now I reach for this as a first line choice vs. injectables, which my clients love.

"A few areas I have come to rely on with this combo product is cellulitis and respiratory infections," adds Dr. Meyer. "When I'm faced with a strep or a staph infection, even before it is cultured, rather than reach for penicillin or gentamycin or even a ceftiofur, I put the horse on a 5–10-day treatment period with Equisul. My track record is impressive with this product. Regarding bad respiratory infections like a beta-lactam *strep* or *zooepidemicus*, we used to use Uniprim at extremely high doses with no results. Now I reach for Equisul and after 10 days – utilizing my diagnostics of blood test, WBC and SAA counts, it's just gone. The more I use it, the more positive results I've gotten from it. I've become more comfortable reaching for it."


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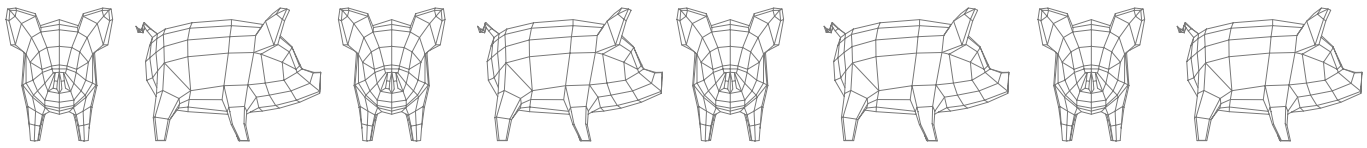
# BENEFITING THE SWINE INDUSTRY WITH APPLIED RESEARCH THROUGH REAL-WORLD CONDITIONS



Luke Minion, DVM (U of MN '00), CEO of Pipestone Veterinary Services, Pipestone, MN, was constantly frustrated that his veterinary team was making decisions for their swine clients based on nothing but educated guesses and opinions.

While there was always company-generated data on animal health products, the experimental designs typically lacked sufficient rigor, i.e., did not employ representative population size and environmental conditions, or proper controls, resulting in inadequate data and the inability to make accurate decisions.

To solve this problem, Pipestone Research was developed, creating an opportunity to conduct scientifically valid research projects under real-world conditions to produce data the veterinarians could rely on and confidently deliver to their customers.

This all started in a single research barn, a 2,400 head, wean-to-finish facility that had been retrofitted for research, including 80 test pens, individual and pen scales and a Feed Logic system.

"I was a professor at the University of Minnesota when this was all going down and was asked to help with a PRRSV vaccine study," recalls Scott Dee, MS, DVM, PhD, Dipl. ACVM (U of MN, '85, '87, '96, '93). "The more time I spent with the vets, many of which were already friends and former students, the more I loved the culture of the company. I also saw the opportunity to positively impact the swine industry and to do it fast. Pipestone was moving fast, helping the farmers progress, making an impact and that excited me. After working 12 years at the university and 12 years as a practicing swine veterinarian, I thought this was a huge opportunity to finish my career right at Pipestone; therefore, I joined the company as their Director of Research."

Thanks to a coherent team approach with a clear vision, Pipestone Research now has six facilities in the Pipestone, MN, area. Five facilities are 2,400 head, wean-to-finish commercial barns that are outfitted for research and one facility is a state-of-the-art biosafety level 2 facility, approved by the USDA. One of the units is dedicated to nutritional research and the other four are for animal health and genetics trials. Utilizing the expertise of 15+ swine industry professionals with advanced degrees, Pipestone Research prides itself on being considered an industry expert in the fields of antibiotic resistance, foreign animal disease, genetics, farm management, swine production and sustainability.

**PIPESTONE RESEARCH PRIDES ITSELF ON BEING CONSIDERED AN INDUSTRY EXPERT IN THE FIELDS OF ANTIBIOTIC RESISTANCE, FOREIGN ANIMAL DISEASE, GENETICS, FARM MANAGEMENT, SWINE PRODUCTION AND SUSTAINABILITY.**

"Two years ago, we set up the Bio Safety Level II facility. It contains six rooms, with air filtered in and out of each room along with Danish entry systems per room. We can have treatment and control rooms without cross contamination issues," outlines Dr. Dee. "We can do proof-of-concept work here and then take the data into the WTF research barns and collect information across 2,400 head of pigs. The Pipestone Research team is scalable to any size trial or study to accurately, quickly, efficiently and effectively conduct and conclude research relating to nearly every aspect of pig farming and swine management practices."

One of the proof-of-concept projects allowed Pipestone researchers to prove viruses could be transmitted via the feed. "For the first time, we proved that PED virus could be spread through consumption of feed. No one had ever done that before," claims Dr. Dee.

As it turns out, the research was so cutting edge, the FBI Weapons of Mass Destruction Directorate took particular interest in the role of feed ingredients as a means of potential agroterrorism attacks on the U.S. "They had discussed the idea for several years, and data we published in conjunction with South Dakota State University and Kansas State University supported the hypothesis that foreign animal disease agents could survive in certain feed ingredients during a simulated shipment from Asia or Eastern Europe to the U.S.," says Dr. Dee. "The FBI said the information presented from Pipestone was considered new intelligence to support the concept of purposeful agroterrorism and was most interested in the use of mitigants to neutralize pathogens." The research earned Dr. Dee a "Warrior Chip" – a special award the agency gives staff members based on outstanding performance.

**THE FBI WEAPONS OF MASS DESTRUCTION DIRECTORATE TOOK PARTICULAR INTEREST IN THE ROLE OF FEED INGREDIENTS AS A MEANS OF POTENTIAL AGROTERRORISM ATTACKS ON THE U.S.**

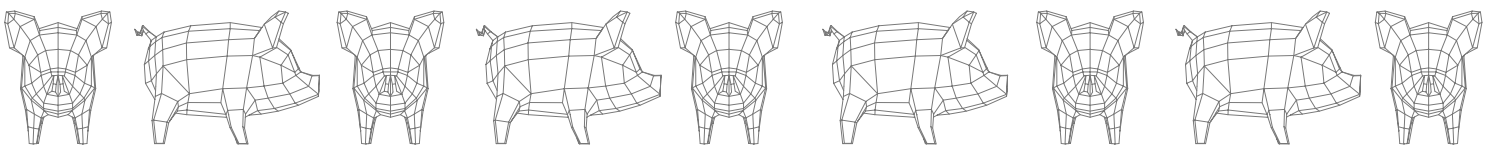
What about other ideas? Where do they come from? According to Dr. Dee, valuable insight on problems and issues in the field come from Pipestone's swine veterinary team. "We then design studies to answer these specific questions as fast as possible. For instance, when we look at a new vaccine, we can test it against the current vaccine on the market, using purposeful challenge and non-vaccinated controls. It's a quick and efficient way to test a new product in a controlled setting, generating accurate data for improved decision making on the farm."

Dr. Dee says these data are shared with Pipestone System clients and the Pipestone Applied Research (PAR) subscribers – currently 16 companies and 2M sows across multiple countries that pay for access to that information 6-months prior to commercial release and publication.

Currently, the Pipestone research teams consist of 20+ personnel across all disciplines – contract research, applied research, nutrition research and Tech Services research. "We routinely conduct over 20 projects a year," the researcher notes.

In conclusion Dr. Dee states, "We can identify the right question, set the trial up correctly to collect accurate data and provide answers to real-world problems in real-world facilities. No more opinions, just data. Just the way Dr. Minion envisioned."

***Note: In upcoming issues, Dr. Dee will report industry-specific data and projects his team is working on. Some of those field studies will look at how air filtration is saving millions of dollars in PRRS and other problematic virus management, the risk of viral transmission in feed: What do we know, what do we do? Mitigating the risk of African swine fever virus in feed with antiviral chemical additives, and other topics critically important to the swine industry.***



# Quest for


Karen Wolfsdorf, DVM, DACT
Hagyard Equine Medical Institute
Theriogenologist and Field Care Veterinarian

According to Karen Wolfsdorf, DVM, DACT (U of FL, '92, '95) Hagyard Equine Medical Institute, Theriogenologist and Field Care Veterinarian in Lexington, KY, being an equine veterinarian is not a job, it's a way of life. "My life totally revolves around horses. Besides my job as an equine veterinarian, my husband and I are involved as owners and breeders in the Thoroughbred industry and my husband and daughter ride and show, retraining off the track thoroughbreds for a new career. Horses are a huge part of our lives."

However, it was the fact that she can work on a problem mare, and then through her efforts, see a black dot that forms into a foal and eventually goes on to race, or to the Olympics, that captured Dr. Wolfsdorf's heart. "They are incredible animals and I've always wanted to be part of that process.

"I was convinced I wanted to be an equine surgeon," she recalls. "Then I had a chance to work with mares in Australia at Scone Equine Clinic during vet school and was instantly hooked on helping them conceive. I came back to vet school and changed everything my junior year to focus more on reproduction. I've never looked back."

Before joining Hagyard Equine Medical Institute in 1996, the Board-certified theriogenologist went back to Australia and worked with renowned equine surgeon, Reg Pascoe, DVM (UQ, Australia '51) and his son David Pascoe DVM DACT at Oakey Veterinary Hospital, becoming one of the first shuttle veterinarians.

When Dr. Wolfsdorf joined Hagyard, she was just one of the three female veterinarians on staff. "Twenty-five years ago, there was some hesitancy of allowing a female into the breeding sheds," Dr. Wolfsdorf recalls. "However, I was committed to making sure my clients got to know me and certainly what I could do for their horses. It's all about building relationships and doing a good job. Like any professional, man or woman, if you don't do a good job, they won't ask you back. It simply comes down to client communication and trust."

It was her insatiable dedication to finding answers (admittedly her pediatric intensivist father's influence) why her clients asked for her specifically time after time. "Because of the concentration of horses around us and the type of owners we have that allow us to find the answers, it allows

THROUGH OUR WORK
WOMAN'S INITIATIVE

# the Unknown

# KEEPS REPRODUCTION SPECIALIST GROUNDED

us to be on the cutting-edge regarding research and practice techniques. I am truly blessed to be able to take advantage of the best of both worlds," states Dr. Wolfsdorf. "I actively participate in equine field service; however, I get to work in the fertility unit with two industry-leading, board certified theriogenologists – Kristina Lu, VMD, DACT (U of PA '00, '00) and Karen Von Dollen, DVM, MS, DACT (UC-Davis, '14, '18). It's exciting to have this much expertise under one roof."

On any given day you will catch Dr. Wolfsdorf on multiple conference calls with academics from around the world. "I'm fortunate that I work in a practice that is so heavily focused on research and teaching as well as practice," she points out.

As a frequent contributor to *The Horse* industry publication, Dr. Wolfsdorf admits she loves to conduct and read research and then translate it into useful knowledge she can pass on to others. She has authored many chapters on equine reproduction as well as lectured worldwide and published research regarding progesterone, retained endometrial cups and equine twin reduction with cranio-cervical dislocation.

Dr. Wolfsdorf (and others at the McGee Fertility Unit and Hagyard) spends a lot of time lecturing on these new-found techniques and research. "Part of our mission is to share our knowledge with the industry," says Dr. Wolfsdorf, "and because we are fortunate to be in such a high-density equine area, our work is always on display to the vet community. It keeps us humble in our approach to research knowing our colleagues will be reading or listening to us talk about it. It's exciting to find answers to questions we keep asking."

Dr. Wolfsdorf adds, "There are a lot of great reproductive veterinarians in our area and we are tied closely to the veterinarians in our community to resolve reproduction problems. We are an extension of their reproduction practice," she explains.

"This cooperation allows us to see more problem mares and problem stallions. We work closely with area vets to develop reproductive plans and help them through foaling. We offer them advanced reproductive techniques such as hysteroscopy of the mare that allows us to go in and investigate the uterus. We also read biopsies, perform embryo transfer, and offer frozen semen. Recently we've added ovum pickup which allows us to send the oocyte to perform ICSI. Our entire team works extremely hard to stay ahead of the knowledge curve and be able to work with our veterinary colleagues to provide the best reproductive successes in the industry. We offer this type of service and partnership to any practitioner, not just our clients."

An area that's extremely important to Dr. Wolfsdorf is mentorship. She firmly believes it is the key to personal and professional growth. "I've been blessed to have some great mentors in my career. My first mentor is my father – a highly skilled (now retired) pediatric intensivist who instilled in me to always question everything and to pursue the answer ferociously. University of Florida theriogenologist Michelle LeBlanc, DVM (Mich. State, '77) spent hours with me helping me find ovaries – something that was very difficult for me initially. Dr. David Pascoe took me to the next step in being a good veterinarian and how to apply information from an academic setting into practice. And of course, Dr. (Walter) Zent, VMD (Cornell, '63) with Hagyard who took me under his wing and showed me how to practice at such a high level in Kentucky. Each of these mentors, and the immense support of my husband and daughters, contributed to who I am today. I am truly thankful to have had each in my career path."

> "THE MORE I KNOW, THE LESS I KNOW."
>
> KAREN WOLFSDORF, DVM, DACT
> HAGYARD EQUINE MEDICAL INSTITUTE THERIOGENOLOGIST & FIELD CARE VETERINARIAN

In conclusion Dr. Wolfsdorf believes, "The more I know, the less I know. There is so much we still don't know. And when you go down the path of the 'why?' it's exciting and intriguing and it just leads you to another question. However, in that process, it makes you a better practitioner and hopefully gets you to the end which ultimately is a pregnancy and a live foal."

# ROOD & RIDDLE'S FIRST FEMALE PRESIDENT/CEO

## WASTING NO TIME AGGRESSIVELY GROWING EQUINE-SPECIFIC PRACTICE

When the shareholders of Rood & Riddle Equine Hospital, Lexington, KY, named fellow shareholder and equine practitioner Debbie Spike-Pierce, DVM, MBA (Michigan State Univ, '93, Ohio Univ '17) to take the President/CEO reins from retired founder Dr. Bill Rood, emotions were across the board. "First I was petrified and then I was overwhelmed," recalls Dr. Spike-Pierce, "however, once it hit me that I was taking over for Dr. Rood – after 40 years of leading the company – the only emotion I had was pride. Other than working for my father the first year after veterinary school, I have worked all my professional career at Rood & Riddle and now I was helping the veterinary shareholders take the next steps. I couldn't be prouder and hope to keep Dr. Rood's practice vision alive."

While working as an ambulatory veterinarian at Rood & Riddle for 20+ years, Dr. Spike-Pierce was confident of her veterinary skills, however, she felt to make the most of the new position, she needed more management experience and day-to-day business skills. "I immediately enrolled in an MBA program to gain the business savvy, people skills and education I felt I needed," she recalls. Two years later she earned her MBA and has put the knowledge to lead the 350+ veterinary and support staff at the exclusive equine practice to good use.

"Our shareholders' (and Dr. Rood's) vision of new growth was realized with the recent acquisitions of veterinary practices in both Saratoga, NY, and Wellington, FL," says Dr. Spike-Pierce. "Our clients asked for this extra service, and we were able to make it happen. Now we have more than 40 full-time employees in Saratoga and an additional 20 in Wellington to make sure our clients' veterinary and specialty needs are taken care of. We are also accelerating our research initiatives, bringing on more young veterinarians in both intern and extern programs and continue to focus on training new equine talent. Education has always been, and will continue to be, a core business decision supported by our shareholders."

Dr. Spike-Pierce admits the position was not something she aspired to do.

"I really enjoyed practicing medicine and dealing with a wide variety of clients and horses. As it turned out, the shareholders wanted a veterinarian and shareholder to take over the position, and I was at a point in my career that this move made sense. While the position is challenging, it has been highly fulfilling. Dr. Rood was a visionary," she continues. "I can't say that is my strongpoint, however, I wanted to keep the practice's growth momentum moving forward. Our goal remains the same – grow the practice for our shareholders, continue to mentor and develop young veterinarians, continue with our research, publishing and speaking to the industry and be part of the community."

While no longer on the road as an ambulatory veterinarian, Dr. Spike-Pierce still spends available time helping her staff by reading and interpreting field diagnostic imaging – something she is highly skilled at and loves to do. "On a stressful day, it's nice to be able to sit at your desk and read x-rays. It briefly slows down my life and is something I have always enjoyed doing."

Dr. Spike-Pierce admits that when she first started practicing in Kentucky, equine medicine was a man's world.

"The benefit to my career was I was my father's tech growing up," she recalls. "I handled every type of horse you could think of and that gave me a skill many young vets don't have, but need to get, prior to practice. It seems that excellent horse handling skills have gotten me further with clients than my vet knowledge. That was especially true with many male clients who only saw me as a petite woman standing next to a huge horse. Take advantage of internships to enhance your skills and help refine them. Experience trumps most anything else when dealing with clients."

Like most successful veterinarians, mentors are huge in Dr. Spike-Pierce's life and professional career. "My father (Richard Spike, DVM, MSU '64) remains my #1 mentor. He instilled in me the benefits of ethical veterinary medicine. Another mentor is Dr. Bill Rood who had a vision for the practice and taught me to always look at the big picture and lean on the people around me."

Another mentor she still relies on today (and person who hired her 20+ years ago as his assistant) is Larry Bramlage, DVM (KSU '75). "While Dr. Bramlage is an internationally recognized equine orthopedic surgeon and past President of the AAEP, he always has time for me. He taught me to focus on research and enhanced my approach to clinical work. That focus has served me well throughout my career. And of course, my husband, Scott Pierce, DVM (U of MO, '83), who taught me so much about communication and how to talk to clients in a way that makes them feel comfortable and hopeful. You can never have too many mentors."

People who know Dr. Spike-Pierce know the clinic has her heart and soul. She has always loved working with the people and the clients. "I feel like I'm a good mediator and people-person who listens and cares," says Dr. Spike-Pierce. "Equine veterinary medicine has been very good to me. It is extremely hard work, but highly rewarding. Anything you want to be good at requires long hours and hard work. During the breeding and foaling season, we're all on-call for our

clients. Because we are a large practice, we can take advantage of downtime and not be here 24/7. It's a balance that we are all working to improve and be able to help one another from a time and life management standpoint. I'm convinced that the next generation of equine vets is ready to face those challenges."

In conclusion Dr. Spike-Pierce notes, "You don't have to come from a veterinary or equine background to be a good equine veterinarian. It's important that veterinary students understand that equine medicine is an excellent career with a personal and financial growth upside. Talk to equine veterinarians and get as much hands-on experience as you can while still in school. Believe me, the first time you see a horse you've treated win a big race or successfully compete, it's worth the effort. There's nothing like it in veterinary medicine."

THROUGH OUR WORK
WOMAN'S INITIATIVE

# Field Analysis of the Effectives and ROI of a PCV2/PCV3 Viral Vaccine

By: Allison Knox, DVM
Walcott Veterinary Clinic, Walcott, IA

Porcine circovirus type 3 (PCV3) is an emerging disease, first identified on a North Carolina sow farm in 2015[1]. The Walcott Veterinary Clinic's experience with PCV3 began in late 2018, where after hearing scientific presentations on PCV3, Dr. Grant Allison requested PCV3 testing on processing fluids collected from sow units that were routinely tested for PRRS and PCV2. These first tests came back positive for PCV3 with PCR Cts in the low to mid-twenties.

In response to these positive results, processing fluid surveillance for PCV3 became more routine. To further ascertain the impact of PCV3, additional samples such as stillborns, mummies, sow serum and finishing pig lung were submitted and returned with positive results.

The current knowledge suggested PCV3 to be a virus that may contribute to reproductive failure and cause damage to the hearts and vasculature of fetuses. Our farms didn't have unusually high percentages of stillborns and mummies, especially in the face of concurrent PRRS challenges, but we knew that a subset of the population was likely affected by PCV3 due to the repeated positive samples.

In the long term, repeated cases of PCV3 reproductive failure presenting with whole litter abortions or increased numbers of stillborn and mummified pigs would lead to a loss of revenue for the producer. To address and potentially reduce reproductive failure associated with PCV3, we partnered with Merck Animal Health for a trial of their PCV3 Sequivity™ vaccine.

The farm chosen for the trial was a 3,000 head commercial breed-to-wean continuous farrow farm that purchased gilts every 4-8 weeks. Newly arrived, mature gilts were enrolled for the trial over a four-month time span. Serum collected from gilts confirmed a subset was PCR positive for PCV3 on arrival to the farm.

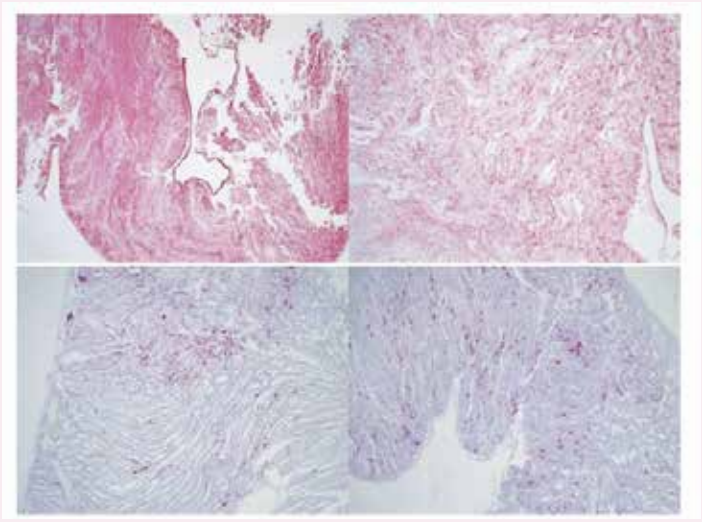
The replacement gilts were divided into vaccinate and control groups. The vaccinates received two doses of Merck's Sequivity™ PCV2/PCV3 vaccine four weeks apart. The controls were not given PCV3 vaccine. Gilts were then bled again at day 35 (RTU) and 2 weeks prior to farrowing. Post-farrowing, we collected stillborns and mummies from any litter having two or more of either condition. We also collected colostrum, processing fluids, and bled three piglets per litter prior to weaning.

Without the benefit of having an established serological test, we were unable to measure immunity in the vaccinated gilts or in any of the piglets born to vaccinated gilts. We had hoped to see a decrease in stillborns and/or mummies, coupled with less viremia in the gilts and pigs as a response to the vaccine.

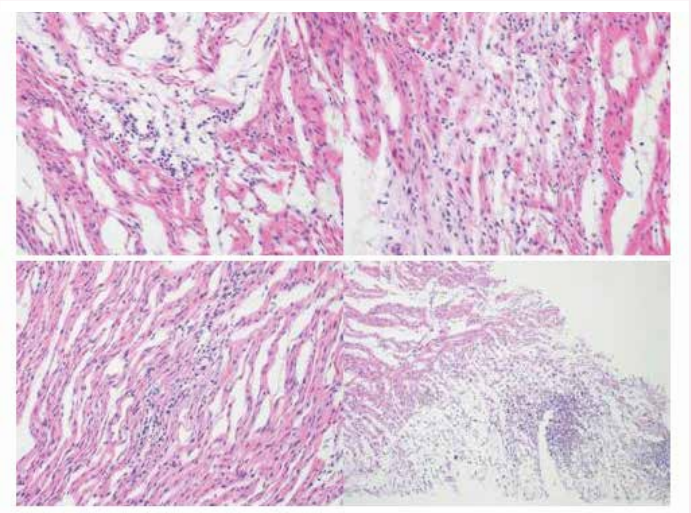
However, with two flare ups of an endemic PRRS strain during the course of the trial, we were unable to obtain any meaningful production data due to the similar signs of reproductive failure in both PRRS and PCV3. ***However, what the trial did show us was that PCV3 is responsible for reproductive failure caused by fetal death***. PCV3 virus as well as viral lesions were present in the heart, brain, kidney, liver and lung of stillborn pigs. We also found that the vaccine provided protection against fetal death and reproductive failure associated with PCV3, and that the vaccine reduces viremia in both the sow and her piglets.

The cost-benefit analysis of the decision to vaccinate for PCV3 or not will vary by producer. In our production system, **being able to reduce fetal loss from PCV3 and avoid the sequelae to piglet viremia paid for the vaccine and produced a positive ROI for the farm**. We have continued to vaccinate replacement gilts on arrival to the farm to maintain PCV3 control. Once available, we anticipate performing serology on previously vaccinated sows to determine the duration of protective immunity the vaccine offers.

[1]Hause B. *Metagenomic sequencing for virus discovery and characterization*. In: Laboratory KSVD, ed: Kansas State University; 2015:32.

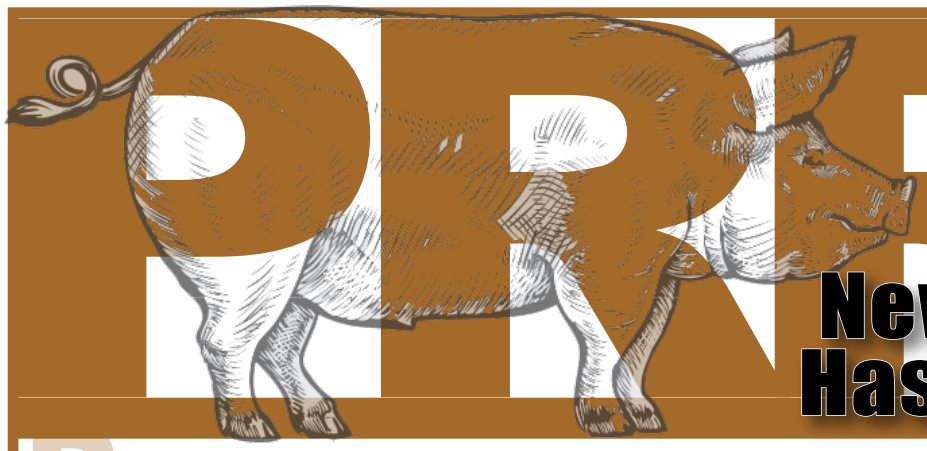


PCV3 REP ISH. Four different sections of heart (4 different fetuses). RED = PCV3



Heart: In two of the two sections, there are multifocal small aggregates of plasma cells and lymphocytes. There is a locally extensive area of fibrosis with scattered leukocytes in one section. In the other section, there are mononuclear leukocytes in the adipose adjacent to the epicardium.

Sequivity is a trademark of Merck Animal Health



# PRRS

# New PRRS Variant Has Deadly Impact

Because of the multi-site, geographically extended make-up of swine farms today, it is important not only to keep as current as possible regarding current swine disease but also to monitor disease occurrences of the past and try to learn from successful or failed prevention measures.

Also, it is important to adapt those measures for improvement in helping to minimize swine disease. The Swine Disease Reporting System[1] (SDRS) collects diagnostic data using several different projects and includes results from four leading diagnostic laboratories-Iowa State University, University of Minnesota, South Dakota State University and Kansas State University.

This collective effort is led by Giovanni Trevisan, *et al*, and is a tool that can be used for those purposes. Many of you might keep the information well in hand, but in any case, the information is a good source to provide thought for discussion.

Not surprisingly PRRS virus continues to be the number one disease issue in the domestic swine population. For the period 3/1/2021 to 4/14/2021, PRRS was the most-diagnosed disease agent for both overall diagnoses and respiratory disease diagnoses. In fact, PRRS diagnoses were around double that of the next most diagnosed disease respiratory agent which was IAV-S. Another telling figure is that overall, since January 1, 2019, about 25-30% of all cases submitted to the participating diagnostic labs tested positive for PRRS virus (29.33% for April 2021).

What is causing the persistently high number of positive cases after years of research and the development of additional vaccines to try and combat the problem?

One possible explanation – which syncs with the ability of the virus to change genomically and avoid both natural and vaccine-induced immunity – is the emergence of the 1-4-4 RFLP strain.

Previous data from the ISU and U. of Minnesota diagnostic labs showed that 1-4-4 was the most frequently detected strain from September through December of 2020. As has been documented, the clinical signs seen with that strain are the same as with others but generally are much more severe in their expression. Existing vaccines seemed to provide very little immunity if any which meant higher mortality in all phases of production, higher reproductive losses, and devastating production losses. Also, it seems to be a very stable, infective virus as it spreads to farms that had been able to stay PRRS-free previously[2].

However, despite the "emergence" of the new 1-4-4 strain, there were a couple of interesting observations from the May 4 report. One is that the percentage of positive cases is following the same pattern as what has occurred since the beginning of 2019.

The new strain hasn't increased the number of positives from samples submitted. There are still about the same percentage of negatives. Also 1-4-4 was the fourth most detected strain in 2020 and so far in 2021 is the third most detected strain. 1-8-4 and 1-7-4 continue to lead the way in terms of number of positive cases, so the more established strains continue to be a problem for the industry. The 1-4-4- strain seems to be more contained at this time as pointed out by the SDRS advisory committee.

The advisory committee makes several other pointed observations, so it behooves all swine practitioners to periodically review the SDRS.

Pointing to the importance of PRRS status of sow farms is the fact that the proportion of cases submitted to the various diagnostic labs for testing was by far the highest for breeding/sow farms (about 50%). Even though there are many more nursery/finishing sites and animals, there were more samples submitted from sow farms for testing.

Sow farm problems lead to down-stream problems as demonstrated in the SDRS report. It was pointed out that the increase in 1-4-4 positive sow farms led to an increase in 1-4-4 positive nursery/finish sites due to downstream movement of animals. At the ISU-VDL for the specified causes of respiratory disease, PRRS, IAV-S, and *Streptococcus suis* have been the most detected causes of clinical problems. IAV-S and PCV-2 saw significant increases in positive diagnoses during the first part of April, but PCV-2 is down the list in terms of number of positive cases.

Through May 20 of this year there have been 688 IAV-S positive cases compared to highs of 1540 in 2020 and 1527 in 2018, so it appears that influenza incidence is pretty much on pace with those years taking season into consideration. Without getting into specific combinations, H3N2 is the leading subtype isolated this year (34+%) followed by H1N2 (34-%) and H1N1 (31+%)3. *Strep suis* also continues to lead the way in terms of being the number one cause of neurologic disease in cases submitted to the ISU-VDL.

Anecdotal reports from swine veterinarians along with diagnostic lab results show that an increase in PRRS incidence leads to an increase in the expression of other problems such as gut-related disease. Along with PRRS, both Porcine Epidemic Diarrhea Virus (PEDV) and Porcine Delta Corona Virus (PDCoV) saw an upward trend in the number of positive cases during the first quarter of this year.

It is interesting to note that the predicted trend lines for the percentage of positive cases for all three diseases pretty much mirror each other. Of the positively identified gut pathogens however, Rotavirus is the most-detected agent in cases of digestive disease in terms of number of cases.

Swine disease agents continue to emerge and be confounding and costly to our farms. Tools like the SDRS are valuable in their ability to provide current information that veterinarians can use to manage existing diseases and try to minimize new ones. It is up to us as animal health professionals to use all the options we have for the betterment of animal health.

[1] https://www.fieldepi.org/SDRS
[2] Weaver, G, Veterinary-Only Meeting, WPE, 6/10/20201

By: Grant Weaver, DVM
Swine Technical Services Veterinarian
Aurora Pharmaceutical, Inc.

# Young Swine Veterin Builds Career but

Ryan Strobel, DVM

Ryan Strobel, DVM (U of MN, '17) is considered the best of the best regarding young swine veterinarians, and it's not by accident that people think that way. Dr. Strobel (nephew to Aurora Pharmaceutical founder and CEO, Mike Strobel, DVM, MS) lives and practices swine consulting with an insatiable hunger for excellence.

And when you are benchmarked against the best in the industry – Dr. Strobel works with the 15-veterinary staff at Swine Vet Center P.A. (SVC) in St. Peter, MN, – he focusses his efforts on building concrete strategies for clients and not limiting his growth as a swine consultant.

"My father (Greg Strobel) taught me early in life to stay aggressive but remain humble," says Dr. Strobel. "That advice has served me well at SVC. Clients (and colleagues) know when you don't have the answer. However, they will respect you if you tell them that you don't know but will get the answer right away. Ask those who do know so that you're never giving your client bad information or guidance. That advice was far more valuable the first year out of vet school than trying to fabricate an answer."

Dr. Strobel recalls, "I remember my dad saying

# arian Aggressively Remains Humble


that he'd never raise pigs and preferred raising cattle. Then in the mid '90s, Dr. (Mike) Strobel helped my dad diversify into pigs as a way of hedging his income opportunity. I was fortunate to grow up on the animal production side of the business and eventually decided to follow in my uncle's footsteps and pursue a degree in swine veterinary medicine."

Today, Dr. Strobel has multiple clients across a wide geographical area. "Like all the veterinarians in SVC, I hold licenses in multiple states," he says. "That is really important to our clients who decide to buy a sow or finishing farm in a nearby state but still want to keep their programs and health plans uninterrupted by training a new veterinarian."

Dr. Strobel's clients range from producers with 200+ sows to larger integrators such as Christensen Farms (CF) in Sleepy, Eye, MN, where he works with the grow-finish part of the operation.

"What I really like about working with CF is that they do a lot of leadership training and collaboration," says the swine consultant. "The really progressive systems like CF see the benefits of outside technical experience to help them grow. They see SVC as a growth partner because we bring a lot of experience and expertise to their business model."

In addition to his other clients, a large portion of Dr. Strobel's week is spent working with Strobel Farms, in Pemberton, MN.

"SVC veterinarians (including myself) oversee all the pig health as well as help with the sow and grow-finish sides of the business. Being so client diversified at SVC has allowed me to see all levels of production medicine and management that I can bring back to Strobel Farms to assure high health and smooth production," he notes.

The highlight of the month for the young veterinarian is the monthly meeting at SVC. "We share problems, issues, how to address questions, diagnostic anomalies, etc.," says Dr. Strobel. "It's great to be in the room with so much swine experience. It really keeps me ahead of the curve having so many excellent veterinarians in the practice that I learn from. Since our veterinarians are working in a wide variety of systems, we get to bounce ideas off each other, share our experiences, etc. It's a full day of information exchange that keeps me focused on my clients' needs. It also allows our clients to have the best care and up-to-date information. I wouldn't be the veterinarian that I need to be without the other veterinarians at SVC."

In conclusion Dr. Strobel adds, "I love the passion of the pig industry. Going out and doing prolapse repairs on cattle did not excite me. The oversight, the population medicine, staying focused on the smallest details of average daily gain and the difference it makes on a cost production model is exciting to me. You can see how the little things really make a difference in the producer's bottom line. That's what gets me up in the morning."

# Weems & Stephens Equine Hospital

## Successful Business Model

# Built on Raising the Standard of Equine Care


David Stephens, DVM

When you walk into the board room at Weems & Stephens Equine Hospital (W&SEH), you see a large white board with the company's business motto and strategic goals. But what makes this team of veterinarians different, is every Tuesday they meet and read out loud the business motto prior to doing anything else.

They also have one vet per week speak about their personal growth plans, customer satisfaction goals and how they are achieving them daily. This staff lives and breathes successful equine medicine and are fully vested in customer satisfaction.

Located north of the Dallas-Fort Worth metroplex in Aubrey, TX, Weems & Stephens is the brainchild of David Stephens, DVM (TX A&M '90) and senior partner Cole Sciba, DVM (TX A&M '99) who merged with the late Dr. Scott Weems and formed what is undeniably one of the most progressive equine-focused practices in the nation.

"We are a full-service equine hospital and referral center for horses requiring specialized medical and surgical care," outlines clinic surgeon Kevin Claunch, DVM, DACVS (TX A&M '10, U of GA '15).

"We provide veterinary services for horses located in northern Texas, southern Oklahoma, and western Louisiana. The hospital facility offers a full range of services including surgery, internal medicine, reproduction, sports medicine, advanced diagnostic imaging and podiatry. The practice also provides ambulatory services for emergencies, routine treatment, preventative care, general reproduction, and medical care without having to leave the farm. We strive to provide premier quality care to our patients and have committed our professional attention to raising the standard of equine care."

Dr. Sciba adds, "With the growth of the Dallas/Frisco metro gobbling up so much farm and ranch land, our customer base is gradually changing. Where 20 years ago 80% of our business was from 6-8 large farms, now it consists of hundreds of smaller owners with 1-10 horses.


Kevin Claunch, DVM, DACUS, removes granulosa cell tumor.


Every Tuesday staff meets to discuss business.

Their demands for top-level equine care have us continually updating our practice, bringing on specialists in surgery, podiatry and ophthalmology."

The growth trend also has them more focused on the growing need for reproductive services. "We decided a few years ago that the practice was going to have to grow in our reproductive services," says Dr. Stephens.

Dawn Boozer, Office Manager

"While Dr. Sciba and Pat Garrett, DVM (Miss St, '00) have expertise in reproduction, including embryo transfers and ETCI, doing that type of work in 100 degrees was not a good situation. We designed and built a new 6,000 sq. ft. reproductive center complete with exam and procedure rooms, offices and lab space. The facility is built with two center aisle barns with 26, 12x16 stalls in each row. The centers can be opened to provide a mare and her foal extra running rooms. It's state of the art and allows our clients and staff the best facilities in the state to manage their mare's breeding and foaling needs."

"The next phase of production will be to build a lameness facility to handle the growing training injuries and lameness issues we are seeing," adds Dr. Garrett. "While we are handling lameness issues already, our goal is to have a dedicated facility for the equine athlete. There we can better reduce injury, while optimizing performance, using evidence-based sports medicine, state-of-the-art digital radiography and ultrasound to ensure superior imaging for our patients and offer Platelet Rich Plasma (PRP), stem cell therapy, shockwave therapy, Lameness locator and computer assisted lameness exams."

According to Dr. Stephens, the model they use for success is quite simple: *Hire bright people, mentor where you need and get the hell out of the way*.

> "Hire bright people, mentor where you need, and get the hell out of the way."
>
> David Stephens, DVM

"The biggest advantage we have is our people and their divergence to specialty areas," emphasizes Dr. Stephens. "For example, Lisa Splawn, DVM (Purdue, '02) is interested in podiatry as well as ophthalmology. This allows us to refer cases to our specialist within the practice. We don't have to refer clients to other specialty practices because we have it all under one roof."

Dr. Sciba adds, "Too many large practices tend to micro-manage their people. We try to generate brand loyalty, not just a person. No one person is the practice here. It really yields stability within the practice. You can plug and play various vets. That allows us all to be able to take time away from the practice without compromising clients or the staff. The diversity of expertise helps our practice grow and fill the needs of our clients."

The veterinary management team at W&SEH is consciously preaching customer service. "We know new hires come with the latest education and skills, however, in our customer service driven culture, we look for more," notes Dr. Stephens. "We want to know if they are compassionate. Do they value customer service? We want better bedside manners and intrapersonal skills. ***Clients don't care how much you know until they know how much you care.*** We're not just filling a hole; we're adding to our family."

After 30+ years in practice, Dr. Stephens is constantly asked, "Why invest any more in the clinic? His answer is always the same – "It's just the right thing to do." And doing the right thing is a huge part of W&S's business model for success.

"To claim that you are a referral hospital, you must invest in the skilled people and the technology to make them shine. Your staff needs to believe in what they are doing and that what they're doing is going to have a lasting benefit for their career and the growth of the practice. I like seeing growth at the practice," the equine practitioner concludes.

"It's the right thing to do for the junior partners and staff. They need to see that management is still dedicated to the growth and success of the business. We want to be the clinic that's out front of the technology curve and bringing on new staff that benefits the collective."


New 6,000 sq. ft. Reproductive Center.

Dr. Stephens and Dr. Claunch in post-op.

# Continuing to Support the Industry Through Research

**Many times, once a drug gets approved by the FDA, companies will stop supporting ongoing research for their products. I take great pride in Aurora's dedication to supporting research projects utilizing our products through both providing product for use in the studies and also through financial grants to support these projects. The following are summaries of just a few of the clinical research projects that Aurora has supported in equine medicine over the last few years.**

**2020: David Wilson, *et al*. Comparative In vitro Susceptibility of Bacterial Isolates from Horses to Trimethoprim/Sulfadiazine and Trimethoprim/Sulfamethoxazole**

In vitro susceptibility testing of 479 bacterial isolates from horses, including *Streptococcus equi* subsp. *zooepidemicus* (n = 282), *S. equi* subsp. *equi* (n = 55), *Corynebacterium pseudotuberculosis* (n = 96), and *Actinobacillus equuli* (n = 46) revealed that 478 (99.7%) were highly susceptible to both trimethoprim/sulfadiazine (TMP-SDZ) and trimethoprim/sulfamethoxazole (TMP-SMZ).

Minimum inhibitory concentration (MIC) values for all susceptible isolates were between 0.12/2.4 g/mL and 1/19 g/mL for both drug combinations and most isolates were susceptible to the lowest concentration tested (0.12/2.4 g/mL). Whereas 52.5% of *S. zooepidemicus* isolates and 60% of *S. equi* isolates had an MIC value for TMP-SDZ that was one concentration higher than for TMP-SMZ, this result is unlikely to be of clinical significance and does not justify the extra-label use of TMP-SMZ in preference to available FDA-approved oral TMP-SDZ formulations.

**2019: Elsbeth Swain, *et al*. Pharmacokinetics of a Sulfadiazine and Trimethoprim Suspension in Neonatal Foals**

Six foals (24–36 hours of age) received a SDZ/TMP suspension (24 mg/kg, q12h, PO) for 10 days. Blood samples were collected at serial time points after the fifth dose (steady state) and at days 5 and 10 of therapy. Plasma concentrations were measured using liquid chromatography mass-spectrometry. Pharmacokinetic parameters were determined using one compartment model. Neonatal foals achieved high plasma concentrations of SDZ and TMP. Mean concentration of each remained above MIC (90) for *Streptococcus equi* ssp. (SDZ/TMP: 9.5/0.5 g/mL) for all time points. All foals remained healthy with normal clinicopathologic findings.

**2018: Gabriel Davolli, *et al*. Concentrations of Sulfadiazine and Trimethoprim in Blood and Endometrium of Mares After Administration of an Oral Suspension**

The objective of this experiment was to assess the concentrations of sulfadiazine and trimethoprim in the blood and endometrium of nonpregnant mares after oral treatment. We hypothesized that the potentiated sulfonamide would reach tissue concentrations greater than the minimum inhibitory concentration (MIC) reported for common pathogens. Over two breeding seasons, mares in estrus were treated with sulfadiazine-trimethoprim (Equisul-SDT® Aurora Pharmaceutical, Inc., Northfield, MN), 333 mg/67 mg combination per mL, at a dosage of 24 mg/kg, orally, every 12 hours for five treatments.

Blood was obtained at 0, 12, 36, and 60 hours. An endometrial biopsy was also performed at 60 hours. In year 1, the mean concentrations of sulfadiazine and trimethoprim at 60 hours were 12.14 mg/mL and 0.25 mg/mL in the blood and 3.19 mg/g and 0.69 mg/g in the endometrium, respectively. In year 2, the mean concentrations of sulfadiazine in the blood were 5.17, 10.22, and 13.39 mg/mL and 0.04, 0.15, and 0.27 mg/mL for trimethoprim at 12, 36, and 60 hours, respectively.

Mean concentrations of sulfadiazine and trimethoprim in the endometrium at 60 hours were 7.96 mg/g and 0.23 mg/g, respectively. Concentrations of sulfadiazine and trimethoprim in the endometrium after five consecutive treatments with the oral suspension were above the in vitro MIC reported for common pathogens known to cause bacterial endometritis, for example, *Streptococcus equi* subsp. *zooepidemicus* (MIC ¼ 0.25e4 mg/mL) and *Escherichia coli* (>0.25e4 mg/mL). The oral suspension of sulfadiazine-trimethoprim should be an efficacious and viable treatment for bacterial endometritis.

**2020: Matthew Klotz, *et al*. Measurement of Gastric pH Following Oral Administration of Balance Stress and Dehydration Aid in Mature Horses**

Three candidate horses with surgically implanted gastric cannulas were acclimated to study conditions for 7 days. Thereafter, they were enrolled in a 5-day treatment period during which gastric pH was monitored continuously. Balance Stress and Dehydration Aid solution (17 g per 5 gallons) was offered as the sole source of hydration for five consecutive days in two 16-liter buckets, filled twice per day at least eight hours apart.

Water consumption was measured volumetrically twice daily (a.m. and p.m.) separated by an interval of at least eight hours. Gastric pH was measured continuously on days 0-4 via catheter probes that were introduced into the lumen of the stomach and attached to external receivers.

Gastric pH was also measured for at least two days prior to dosing and one day after treatment as described above. Data recorded by the receivers was uploaded electronically at daily intervals. All gastric pH readings included at least 12 hours of useable pH data. Balance solution had an overall positive effect of raising the average gastric pH above 4.0 for a longer duration (10 hrs.) during the treatment and post-treatment phases compared to the untreated baseline (6 hrs.).

**2020: Matthew Klotz: A Prospective Study of Clinical Case Potentiated Sulfonamide Sensitivities of *Streptococcus* sp. From Horses**

Data reported demonstrates that potentiated sulfonamide resistance is commonly reported in error. Thirty three of the 39 cultures (85%) demonstrated resistance when cultured on sheep blood versus only one of the samples (2%) being resistant on horse blood fortified agar. These common erroneous findings of resistance are due to sheep blood containing high concentrations of thymidine which acts as an antagonist to the action of potentiated sulfonamides on the agar. This has been previously reported at AAEP 2005 convention (DJ Feary, *et al.*); however, the information has been either poorly disseminated to the veterinary community or ignored due to the convenient supply and low cost of the sheep blood fortified agar culture plates.

The solution to attaining accurate sensitivity results is to perform equine origin cultures either on horse blood fortified agars or sheep blood fortified agars that have been treated with thymidine phosphorylase per the guidelines set forth by the Clinical and Laboratory Standards Institute.

This project is continuing in 2021 with a broadened geographical range of participating practices. STAY TUNED for more to come!

**By: Matt Klotz, DVM, Equine Technical Services Veterinarian Aurora Pharmaceutical, Inc**

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# FINAL THOUGHTS

## A Short History of Aurora Pharmaceutical, Inc. and Why it is So Easy to Do Business With Us

**By: Mike Strobel, DVM, MS,**
**President/CEO**
**Aurora Pharmaceutical, Inc.**

When I decided to make the leap from practicing veterinary medicine to manufacturing pharmaceuticals, it represented the culmination of over 28 years of solving client animal health problems in our practice. The road to those solutions was not always quick or easy. All along the way, my wife Shelley and I raised 3 great kids.

Like most practicing vets, I saw a steady evolution in what and how we serve our clients and patients' needs. When I first started practice, it was mostly about perfecting the skills I learned in veterinary school and getting comfortable working with clients every day. That process kept me pretty busy for the first five years. At that point I found myself looking into ways to increase the challenges and I had to start to adapt to the changes that were occurring in livestock farming and farming in general in the late 1980s. The transition from relatively small, family-run farms to larger farms with a greater focus on hired help forced me to change the way I approached practice and to what our practice did. I went from a 90% dairy practice to a 10% dairy practice in a matter of three years.

Switching to a swine and small animal practice was what was needed as our practice area changed. These challenges forced us to look at every aspect of our practice and ultimately made the practice better. Diversification in practice is a good thing. One of the things I really appreciated looking back at all the things I have done in my 39 years as a veterinarian, is how well the diversified education I had prepared me to meet those challenges along the way. I often speak with veterinary students who say they only want to learn about one track of veterinary medicine. I relate the experience I have had and how by not limiting myself early on I was able to adapt better to opportunities that came along. If I had chosen to only be a dairy practitioner in veterinary school, my life would likely have involved a very different path.

There is no single way to practice veterinary medicine. That is one of the great things about this profession.

As I moved forward into the 1990s our practice continued to evolve with the expansion of both our small animal practice and swine practice segments. We have one large swine producer locally which caused us to adapt to their needs for increased service and supply needs along with changing biosecurity and disease challenges associated with larger groups of animals. On the small animal front, we became an AAHA registered clinic, one of the first in outstate Minnesota during that time and elevated the quality of medicine we practiced. This change caused us to go from 1 to 4 small animal practitioners in three years.

At the same time, I made the decision to go back to school and get a master's degree in population medicine with a focus on swine and pharmacology, so I could better meet the needs of my clients. It was definitely a challenge going to school and practicing at the same time, but the rewards both personally and professionally were significant. It is a big reason why Aurora came to be.

During that same period in the late 1990s, we got involved in compounding products for our swine clients as a means to better treating the large groups of animals involved. This turned out to be a very successful endeavor, but had its own challenges which involved navigating FDA requirements which changed after AMDUCA came into effect. Compounding allowed us to develop intellectual property which ultimately became Equisul-SDT® (Sulfadiazine/Trimethoprim) for Aurora and was the reason we started Aurora in 2010. I actually began the approval process for Equisul in 2002 when it became apparent that compounding was not the best way to make this product and that we could make a better and safer formulation from bulk approved ingredients as opposed to starting with FDA-approved finished dosage products as starting ingredients.

This requirement in the law which unfortunately is largely being ignored in the companion animal world, is still the law today. It appears the FDA is on the verge of enforcing the law again after many years of tolerating illegal adulterated new animal drugs in the veterinary market. Although we could have gone down that same pathway with our compounding pharmacy, we decided it was better to do things the right way even if that limited what you could do for patients.

This distinction is another reason Aurora came to be. In 2007 we began building our current manufacturing facility in Northfield, MN. We finished it in 2009 and after qualification as an FDA/EPA approved facility, began manufacturing in 2011. We received our first FDA approval for Equisul-SDT in 2013. We are currently completing an addition to that facility which will allow us to triple our manufacturing capacity as we continue to get additional FDA, EPA and USDA approvals.

Since we began, we have been building a phenomenal team of people who make Aurora possible. Our people make sure we are producing the highest quality products possible. Anyone who has worked with Aurora knows that we do business differently. When I first started practice, there was a company, Norden Animal Health, that had a very customer centric approach to working with veterinarians. Norden was started by a veterinarian just like Aurora.

I wanted Aurora to have the same relationship with our veterinary colleagues. To that end we do a lot of things differently at Aurora.

### They include the following:

1. Pay attention to what veterinarians and clients want
2. Don't ask people to buy more than they need today
3. Have a pricing system that is simple and fair to all practices and ultimately clients
4. Constantly improve on our products whether they are proprietary or generic
5. Do research to support all the uses of our products and fill knowledge gaps
6. Listen to our veterinary clients and their customers
7. Work as a team to provide the highest quality products that enhance the veterinarian's ability to effectively treat their patients
8. Never stop trying to do better

This approach is the culmination and ongoing commitment I have to every customer who chooses to use Aurora Pharmaceutical products. I am not done with this adventure. We have many new products in our pipeline which will continue to impact you and your clients in the coming years. I want to thank everyone who has made this all possible. I couldn't have done all this without each of you. As a current or future customer of Aurora Products, we appreciate you every day.

# CONGRATULATIONS

TO THE RECIPIENTS OF THE

## AURORA PHARMACEUTICAL, INC. 2021 INAUGURAL DVM STUDENT SCHOLARSHIP PROGRAM

**Valeria Rae Johnson – Michigan State University**
**Hannah Carter – Mississippi State University**
**Allyson Patterson – North Carolina State University**
**Eliza Theis – University of Minnesota**
**Tyler Dick – University of Minnesota**
**Maryanna Hudson – Mississippi State University**
**Colton Hull – Kansas State University**
**Maggie King – University of Minnesota**
**Sabra McCallister – North Carolina State University**
**Charles Logan Murray – University of Georgia**
**Rebecca Riggs – Purdue University**
**Emily Terry – Texas A&M University**
**Katie Warner – University of Minnesota**
**Katelyn Williams – University of Georgia**

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neric drugs and products that are as effective as the pioneer brands sold in most clinics. My business goal was to make basic care affordable. These products help me keep that goal in mind."

ONE OF THOSE THAT IS REALLY MAKING A DIFFERENCE IS REVOLT® (SELAMECTIN).

"I recommend Revolt to all my clients for year-round flea and heartworm protection at a fraction of the cost of Revolution®(selamectin)," the mobile vet states. "I service an area where these parasites and pests are here all the time. There is never a time that they are not active and should not be prevented."

Valerie Coerver, DVM

Dr. Coerver adds, "The active ingredient, selamectin, is still highly effective, and the way Aurora has developed their packaging to mimic Revolution's color coding, is an easy transition from Revolution to Revolt for me and my clients. Both me and my clients love the fact that Revolt is made in the USA and not overseas," she adds.

"That's a big selling point for my clients. They also love the easy applicator that Aurora has redesigned for non-messy application. That's been a huge client-adherence and repeat purchasing advantage over Revolution. I have been pleased to date with the product and continue to recommend it for year-round protection."