



# ANC

The Animal Neurology Center

MARCH 2026



ANC  
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[www.AnimalNeurology.com](http://www.AnimalNeurology.com)

# A word from the owner

## Education is Our Obligation

There has been increasing discussion in the veterinary profession about looming challenges in training the next generation of doctors. Ten years ago, there were approximately 30 veterinary schools in the United States. Today there are 34, with 12 more in the approval pipeline for 2029. At the same time, class sizes have grown substantially, with enrollment increasing by more than 37 percent over the past decade. Many newer programs rely on distributive clinical models, sending students off site for hands-on training as opposed to traditional teaching hospitals with seasoned clinicians



Growth reflects demand and opportunity. But expansion without proportional investment in faculty, specialty mentorship, and clinical infrastructure has consequences. Compounding this challenge is the reality that academia continues to thin as specialists increasingly choose private practice over traditional faculty life. The reasons are understandable, but the downstream effect is significant.

Believe it or not, some graduating veterinarians may complete their education without ever practicing clinical neurology, relying on what they learned in a lecture hall buried between other classes.

That should concern all of us.

When I reflect on my own training, I am reminded how profoundly mentorship shapes career direction. There was a time I considered becoming a dentist, not because I found teeth particularly compelling, but because of an exceptional teacher who made the subject come alive (Thanks, Dr. John Lewis)! Enthusiasm, approachability, and the ability to see potential in students can redirect entire careers. If mentorship erodes, inspiration erodes with it. At the Animal Neurology Center, we have committed to meeting this challenge deliberately and responsibly through four core approaches.

### 1. A Primary Site of Clinical Training

ANC serves as a primary clinical training site for students from both traditional and distributive programs. Students receive immersive, hands-on experience under the guidance of residents and board-certified neurologists.

They do not simply observe. They perform neurologic examinations. They localize lesions. They participate in case discussions. They interpret advanced imaging and understand surgical planning. They train in an environment equipped with the technologies that define modern specialty practice, gaining exposure to what high-level neurology truly looks like.

## 2. Training Tomorrow's Neurologists

Through our continued partnership with the University of Missouri, we maintain our hybrid residency program. Residents gain experience in both academic and specialty practice environments, blending scholarly rigor with real-world clinical demands.

We are not simply training specialists. We are training educators – they learn from students as students learn from them.

## 3. Strengthening Our Local Veterinary Community

Education does not end at graduation. Each month, we host continuing education events for the St. Louis veterinary community across a range of specialties. These programs foster collaboration, collegiality, and shared growth.

A strong local professional network improves patient care for the entire region.

## 4. Weekend Immersive Seminars – Learning by Doing

Perhaps most uniquely, we have built immersive weekend seminars designed to move beyond passive education.

This is not sitting anonymously in a massive lecture hall. It is not watching a polished video from the back of the room. It is not a brief lunchtime overview.

At ANC, attendees learn in every way possible.

They do not hear the story of building a specialty hospital from a third party. They speak directly with the owner.

They do not watch a neurologic examination on a screen. They perform it themselves.

They do not observe someone else scrolling through MRI sequences. They sit at the workstation and push the mouse clicks.

They do not watch a spinal tap demonstrated on video. They hold the needle.

This level of immersion transforms knowledge into confidence. It shortens the distance between theory and application. It ensures that when participants return to their practices, they are not recalling slides. They are recalling experience.

Our current offerings include advanced imaging, neurosurgical labs, foundational neurology, and urgent neurology training. We are expanding into anesthesia, additional specialties, and technician-specific courses. Our aim is to make St. Louis a meaningful destination for high-level veterinary education.

Veterinary medicine is becoming more complex, not less. Diagnostics are advancing. Treatment options are expanding. Expectations are rising.

If academic institutions are stretched thin, specialty practices must help shoulder the responsibility.

We are the tip of that spear.

At the Animal Neurology Center, education is not an accessory to patient care. It sharpens our thinking, strengthens our culture, and honors the mentors who once invested in us. We are committed to ensuring that mentorship, rigor, and inspiration remain central to the profession we love.



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**Fred Winger, VMD, MS, DACVIM (Neurology)**

Owner / Neurologist / Neurosurgeon

# Case of the Month: Bacchus

When Bacchus, a 6-year-old terrier mix, first came through our doors at The Animal Neurology Center, his pain was overwhelming. He could not place one of his hind limbs on the ground without crying out. Even gentle touch around his lower back caused him to scream. It was heartbreaking for his devoted owners, who had already done everything right. Bacchus had been evaluated by several veterinarians. He had received anti-inflammatory medications and pain relievers. X-rays of his spine and limbs had been performed and reviewed by a board-certified radiologist. The only finding was mild arthritis—certainly not enough to explain the severe pain he was experiencing. Yet despite treatment, Bacchus continued to worsen. By the time he arrived at ANC, he was so painful we could barely complete a neurologic examination.

## Finding the Hidden Cause

Given the severity of his signs and the lack of answers so far, we recommended an MRI of his spine. MRI allows us to see soft tissues, discs, nerves, and bone changes in far greater detail than X-rays.

The MRI revealed the true culprit: severe discospondylitis.

Discospondylitis is a bacterial infection that affects the intervertebral disc, which acts as a cushion between the bones of the spine, and the adjacent vertebral endplates. In many cases, the infection is thought to begin elsewhere in the body—often as a urinary tract infection. Bacteria can enter the bloodstream, travel through the body, and lodge in the vertebral endplates, where they begin to damage the disc and surrounding bone.

Although discospondylitis can sometimes be seen on radiographs or CT scans, early or aggressive infections often require MRI for a definitive diagnosis. In Bacchus' case, the MRI made the diagnosis clear and allowed us to understand just how severe the infection had become.

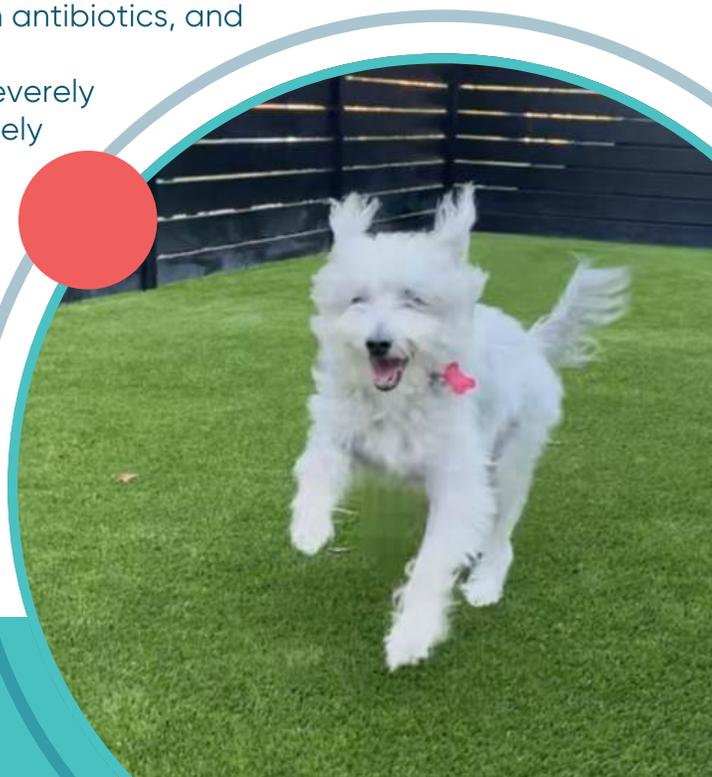
## When Infection Leads to Collapse

Traditionally, discospondylitis is treated with long-term antibiotics, and many dogs improve with medical therapy alone.

Unfortunately, Bacchus' infection had progressed so severely that the affected bones in his lower spine had completely collapsed. This collapse compressed the origin of the sciatic nerve—the major nerve supplying the hind limb.

The pain he was experiencing was not simply inflammation. It was direct nerve compression. There was no way to relieve that pressure without surgery.

**Scan to watch more of Bacchus' story!**



# 🩺 Case of the Month: Bacchus (cont'd)

## A Combined Medical and Surgical Approach

Using advanced surgical planning, we placed a specialized orthopedic implant to stabilize Bacchus' spine in the ideal position. This restored alignment, relieved pressure on the nerve, and allowed the spine to heal in a stable, supported configuration. The improvement was almost immediate.



Within a day of surgery, Bacchus was standing and walking without the excruciating pain that had defined his recent weeks. For his owners, it was an emotional moment to see their dog comfortable again.

Although surgery corrected the mechanical compression, the infection itself still required treatment. Bacchus remained on carefully selected antibiotics for over a year to ensure complete resolution. Follow-up CT imaging has now confirmed that the infection has resolved and the spine has healed appropriately.

He has been pain-free since his procedure in March of last year and is expected to live a normal, happy life.

## Why Bacchus' Story Matters

Bacchus' journey is a reminder that when a pet's pain does not match the answers we have, we must keep searching. Advanced imaging can reveal conditions that are not visible on standard X-rays. And while many spinal infections can be managed medically, some require a thoughtful combination of surgery and long-term antibiotics to truly restore quality of life. For us, there is nothing more rewarding than seeing a patient who arrived in unbearable pain walk out of the hospital comfortable and hopeful. Bacchus' excellent recovery is a testament to the power of persistence, advanced diagnostics, and a collaborative medical and surgical approach.



## Industry Partners

### Innovation Grounded in Integrity

Bacchus' recovery was possible because of a spinal stabilization implant. His case required advanced surgical planning, precise execution, and dependable instrumentation. The construct we used – an Artemedics polyaxial screw and rod system – provided the stability necessary to allow healing and neurologic recovery. His outcome reflects clinical decision-making and teamwork, but it also reflects thoughtful engineering. That story is as much about responsible industry partnership as it is about specialty care at the Animal Neurology Center. Artemedics was founded by Ben Arcand and Emily Meyering, who worked together for several years at a medical device company. Outside of work, over local craft beers, they often shared stories about their pets and discussed the opportunity to bring high-quality device innovation into the veterinary space.

Emily brought experience directing preclinical studies. Ben brought engineering expertise. With support from close colleagues in intellectual property and legal agreements, the operational framework was strong. But what shaped Artemedics most was their decision to engage directly with veterinarians before building broadly. They met with veterinary surgeons across the country to understand the challenges encountered in complex cases. They asked what worked, what did not, and where instrumentation could be improved. Their systems were developed in response to those conversations. That approach reflects integrity in design.



### Practical Impact in Neurosurgery

Artemedics is now recognized for multiple neurosurgical tools, most notably its polyaxial screw and rod constructs for spinal stabilization. In practical terms, this system has improved surgical efficiency and construct versatility. The polyaxial design allows flexibility in screw angulation and alignment. Instrumentation is durable and intuitive. Stabilizations are more reproducible and consistent. Procedures that were once technically demanding or limited by instrumentation constraints have become more standardized. That reliability matters – particularly in cases where stability directly influences neurologic recovery. At ANC, we use Artemedics as our sole orthopedic supplier for spinal stabilization. That decision reflects both performance and trust.

### Integrity Beyond the Operating Room

Engineering alone does not define a partner. Conduct does. Artemedics prioritizes pets and the families who love them before profit margins. They focus on long-term relationships and professional collaboration rather than short-term transactions. They are also aligned with our commitment to education. Artemedics is the primary sponsor of our upcoming neurosurgical course, which brings veterinarians from across the United States and internationally – including colleagues from Guatemala – to refine advanced spinal techniques.

## Industry Partners

Their involvement is hands on. They are present in the laboratory. They demonstrate proper construct application. They review technique and answer technical questions directly with participants. This is not symbolic support. It is active engagement.

### A Shared Standard

Strong outcomes in complex spinal disease depend on many elements: sound clinical judgment, coordinated surgical teams, anesthesia support, and well-designed implants. Industry partners play a meaningful role in that framework. Bacchus' case reminds us that innovation and integrity in device design can directly influence patient outcomes. At the Animal Neurology Center, we choose partners who share our standards – transparency, responsibility, education, and patient-first thinking. Artemedics meets that standard. They are not simply a supplier. They are a collaborative partner whose engineering and integrity help make advanced neurosurgical care possible.

## Learn more about Artemedics:

[www.Artemedics.com](http://www.Artemedics.com)



**Working alongside veterinary neurologists and neurosurgeons has fundamentally transformed how Artemedics designs veterinary medical devices. By actively learning from unmet clinical needs, we develop higher-quality, more precise implants that address real challenges in the operating room and improve patient outcomes. Our partnership with The ANC through the Neurosurgery Workshop series provides hands-on, 1:1 collaboration with specialists, allowing us to integrate direct feedback into the next generation of innovative products.**

**-Emily Meyering**

## 🥰 Cutest Patient Award

Drama, drama, drama... 🐾

The Cutest Patient Award this month goes to our favorite Husky, Nanuk.

For the unindoctrinated, Siberian Huskies are legendary for their performative flair. Equal parts opera singer and method actor, they bring a certain theatrical intensity to every life event – especially veterinary visits.

This month, Nanuk demonstrated just how challenging a neurologic examination can be when the patient believes he has been personally wronged by the process. Between soulful vocalizations and dramatic glances toward his devoted humans, he somehow managed to cooperate just long enough for us to complete his consult.

And, in true Husky fashion, once the curtain fell and the performance concluded, he recovered beautifully.

Afterward, he returned home – presumably to decompress at his routine facial.

Bravo, Nanuk. Standing ovation.



# From the CE Lecture Hall

## The Show Must Go On: WVC 2026

The Western Veterinary Conference (WVC) is one of the largest and longest-running continuing education events for veterinary professionals in the United States. Held annually for nearly 100 years, it draws more than 20,000 veterinary professionals from around the world and features over 600 exhibitors—many of them valued partners of The Animal Neurology Center. For Dr. Fred Winger, WVC is his “home” national conference. After being named Speaker of the Year in 2024, he returned this year to deliver 12 hours of continuing education to thousands of veterinarians seeking practical, neurologically grounded insight they can bring directly back to their practices. This year, however, started with a memorable twist.



## A Gait Lecture...Without Gait

The opening lecture, Gait Game 2.0, centers on visual analysis of dogs walking—subtle asymmetries, compensatory shifts, and the nuanced differences between orthopedic and neurologic disease.

Moments before the lecture began, the monitors failed.

A gait lecture with no video.

With a full room and no time to troubleshoot, there was only one option left: act it out.

Hypermetria had height. Paresis had posture. Ataxia had exaggeration. For an hour, the visual aids were replaced by live demonstration and audience engagement.

What could have been a disruption became one of the most interactive sessions of the conference. The audience was supportive, participatory, and fully engaged. As is often true in medicine and in life, the unexpected became the most memorable.

Freed from slides, the session leaned more deeply into “under the hood” concepts—especially proprioception, the nervous system’s innate spatial awareness mechanism. It is the internal map that governs everything from facial expression to finger placement to toe positioning. When we evaluate gait, we are not simply observing limbs. We are observing the integration of sensory input, spinal cord transmission, cerebellar modulation, and cortical control.

When the PowerPoint disappears, what remains are shared concepts and shared experience—and those are often richer than any video.



## Primary Take-Home Points from WVC 2026

### **Gait Game 2.0**

Abnormal gaits due to orthopedic disease tend to be consistent in their irregularity.

Neurologic gaits, by contrast, are inconsistently inconsistent. Variability is often the clue.

### **3D Printing Workshop**

3D printing can convert CT datasets into patient-specific surgical tools and guides. When thoughtfully applied, this technology improves precision and can make surgery safer and more effective.

### **Regurgitation and Megaesophagus**

Modern management strategies for megaesophagus continue to evolve. In select cases, botulinum toxin injections targeting the lower esophageal sphincter may reduce functional outflow resistance and improve clinical outcomes.

### **I'm floppy and I can't get up—Lower Motor Neuron Disease**

Myasthenia gravis in cats can be drug-induced, particularly with methimazole therapy. A classic clinical sign is ventral neck flexion—a presentation with a finite and important differential list.

### **Seizure Step-by-Step Management**

Phenobarbital remains a mainstay of seizure management. While the therapeutic range is constrained by the risk of hepatotoxicity, serum concentrations should be optimized before labeling a patient as drug-resistant.

### **Frenchie Fanaticism**

Among French Bulldogs, tethered cord syndrome is an important consideration. In this condition, the spinal cord is abnormally anchored, leading to pain or irritation often perceived in the rear limbs or lumbosacral region.

### **Know when to hold'em, know when to fold'em -When to Refer**

Vestibular syndrome is essentially vertigo in dogs. Peripheral vestibular disease (inner ear) can typically be managed in primary care.

Central vestibular disease (brainstem) warrants referral to a neurologist.

WVC continues to be a place where ideas are shared, partnerships are strengthened, and the profession gathers to elevate its standards of care. We are grateful to the thousands of colleagues who filled the lecture halls and leaned into the discussion—even when the screens went dark.

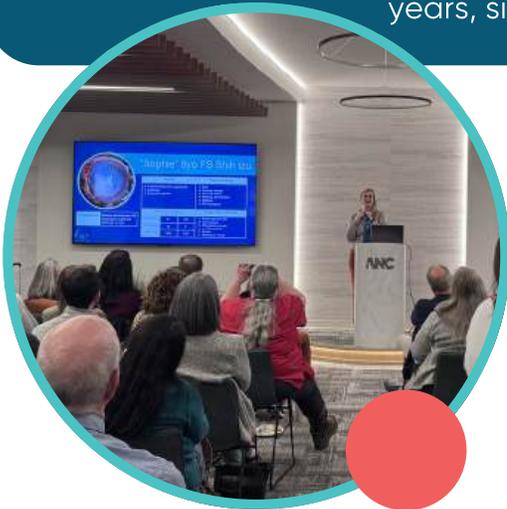
If you attended Dr. Winger's lectures and would like access to his PDF materials, please click [here](#). You will be directed to a portal that authenticates attendance and provides the download.

# Ophtho in the Neuro House

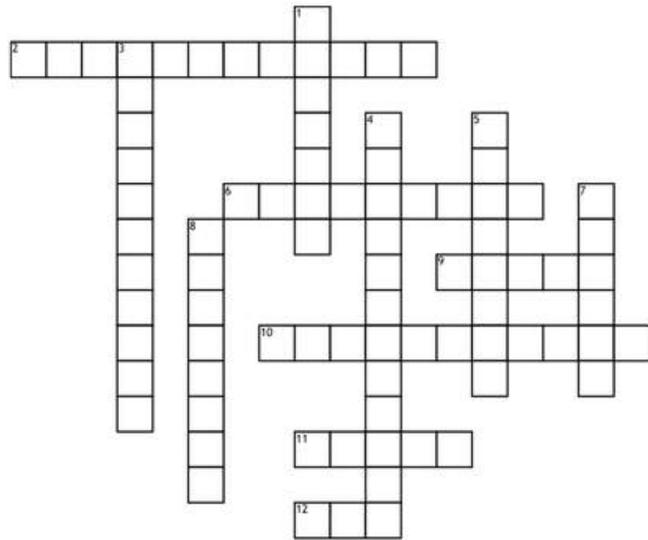
The ANC was proud to host our first local specialty colleague, Dr. Kelli Zimmerman from Animal Eye Associates, for a CE lecture titled "Ophtho Faux Paws." We had a full house of local veterinarians eager to learn the latest in ophthalmology. Events like this are a great reminder of how valuable it is to bring specialists and general practitioners together to learn from one another and strengthen the collegial connections within our local veterinary community.

## Clinical Pearl Takeaways from Ophtho Faux Paws Lecture

If a patient presents with primary glaucoma in one eye, it's critical to treat the fellow eye prophylactically, even if it appears normal. Studies show that prophylactic treatment can delay glaucoma onset in the other eye by up to 3 years, significantly improving the patient's quality of life.



## Test your ophtho knowledge



## Not able to join us for this one?

We've got ya covered with the notes and recording, generously provided by Dr. Zimmerman for the next month!



### Across

- 2. Key medication used to treat (KCS) that works by stimulating tear production
- 6. Common complication in dry eye disease where the cornea becomes inflamed and scarred
- 9. Surgical procedure that can be used to relieve glaucoma by placing a tube in the eye to regulate fluid flow
- 10. Parasympathomimetic medication used to treat neurogenic dry eye

- 11. Common sign of acute glaucoma where the cornea appears cloudy due to high IOP
- 12. Common condition in dogs characterized by an inadequate tear film, leading to dry eyes.

### Down

- 1. Type of glaucoma that is present at birth due to an abnormal drainage angle in the eye
- 3. Drug that can lower IOP by increasing the outflow of aqueous humor

- 4. Drug class used to reduce intraocular pressure in glaucoma patients.
- 5. When the drainage system of the eye becomes blocked, causing excessive tearing
- 7. Term for the light-sensitive structure at the back of the eye, often damaged in glaucoma
- 8. Test used to assess the quantity of tears produced by the eye

## In the News

### KBroVet® (Potassium Bromide) Receives FDA Approval for Dogs

Potassium bromide—one of the oldest antiseizure medications in medicine—has received FDA approval for use in dogs under the name KBroVet®.

Bromide is the oldest anti-seizure medication (actually one of the oldest medications, period) but has not been adopted by younger veterinarians who might favor newer drugs like levetiracetam (Keppra) due to their favorable side effect profiles. However, bromide continues to offer several important advantages and should remain part of the epilepsy treatment toolbox.

- Once-daily dosing, simplifying compliance
- Minimal monitoring requirements, reducing long-term costs
- Long half-life, making occasional missed doses less consequential
- Renal clearance, posing no risk to the liver
- Cost-effective for lifelong epilepsy management
- Additive effect with other antiseizure medications, often improving seizure control in combination protocols

#### Side Effects and Cautions

Common side effects include increased thirst and urination, sedation, and pelvic limb ataxia. Less common but important concerns include pancreatitis and dermatologic reactions. Bromide should never be used in cats, as it can cause serious pulmonary complications. KBroVet® is manufactured by PRN Pharmacal, a supporter of The Animal Neurology Center and its educational initiatives. Sometimes the oldest medications remain among the most practical—and potassium bromide is a timely reminder of that fact.

Read the official FDA press release here:





# Education & Events Calendar



Sunday,  
March 29<sup>th</sup>  
9:30 am

## Mimosas in March | Dr. Michael Warshaw, Staff Veterinarian St. Louis Zoo (ANC | St. Louis, MO)

Join us for a morning lecture (and mimosa!) and a look behind the curtain of veterinary care within zoos.



April 10-12,  
2026

## Advanced Neurosurgical Course (ANC | St. Louis, MO)

12 veterinarians from around the country will come to learn about 3D Printing techniques, spinal stabilization and surgical magnification. **SOLD OUT**

Friday,  
April 24<sup>th</sup>  
6:30 pm

## The Science of Happy: Unleashing the Power of Big Potential! | Dr. Abby Whiting (ANC | St. Louis, MO)

Learn about the neuroscience of happiness, what makes us who we are, and how to build highly functional, superstar veterinary teams.



## WHERE YOU'LL FIND ANC DOCTORS SPEAKING

### • March 12-15, 2026 – International Veterinary Seminars (IVS)-Kauai, HI

8-hour module on emergent neurologic conditions and their management

• March 31 – April 2, 2026 – Southeast Veterinary Neurology Conference-Miami, FL  
Electrophysiologic techniques for neuromuscular disease, presented to veterinary residents

### • April 29 – May 1, 2026 – Siemens Innovation Summit-Nashville TN

“Fur Fields and Paw Pulses: Inside Veterinary Neuroimaging”. Dr. Winger teaches human imaging technologists about the challenges faced in veterinary imaging.

### • May 29, 2026 – Fetch by DVM 360-Nashville, TN

Dr. Winger speaks on a variety of neurologic topics. Our team will be onsite with our booth showcasing the ANC.

• June 11-14, 2026 – ACVIM Forum- Seattle, WA  
Dr. Winger will present a keynote lecture on Artificial Intelligence and its impact on Veterinary MRI.

### • June 27 – July 4, 2026 – International Veterinary Seminars- FIJI (YES FIJI)!!!

Dr. Winger speaks on all things neurology in between Mai Tais and Scuba dives- Don't miss it!