

Vet Pulse

Spring 2025

IMPORTANT INFORMATION FOR OUR REFERRING VETERINARIANS



New C-arm Machine is a Game Changer

The new GE OEC Elite mobile C-arm allows veterinary teams in several specialty services to capture high-resolution, continuous pulse X-ray images in real-time during surgical procedures. The Internal Medicine service utilizes the C-arm for multiple procedures, including cystograms and urethrograms, allowing clinicians to evaluate the urinary bladder and lower urinary tract by examining the anatomy and function with contrast.

The Cardiology service uses the C-arm's fluoroscopy imaging to capture intricate details even during heartbeat motion. This aids clinicians in procedures such as patent ductus arteriosus and pulmonic balloon valvuloplasty, allowing the team to guide small wires through the vascular system.

Orthopedic surgeons use the machine to improve the precision of fracture alignments and hardware placements. In soft-tissue surgeries, the C-arm is essential for visualizing both subcutaneous ureteral bypass devices and ureteral stents. The purchase of the C-arm machine was made possible through donations to the Companion Animal Fund.



SERVICE SPOTLIGHT

New Life at ISU Vet Med: The Theriogenology Service in Full Swing

Spring is in the air, and that means one thing—it's baby season in Iowa! The Theriogenology Service at ISU-CVM is in full swing, assisting clients and veterinarians with reproductive care for small animals, horses, and livestock. Our team is available 24/7 for dystocia assistance across all species, ensuring healthy births and reproductive success.

Meet the Team

Our Theriogenology team is led by three boarded Theriogenologists and supported by dedicated residents, technicians, and specialists:

- **Dr. Theresa Beachler, Dr. Olivia Stricklin, Dr. Caitlin Wiley**
(Boarded Theriogenologists)
- **Dr. Katie Newman, Dr. Tressa Reiner**
(House Officers)
- **Liesel Schwartzkopf, RVT; Marianna Jahnke, Embryologist; Grace Barman, Cryolab Support**

Together, we are committed to providing top-tier reproductive care for pets, horses, and livestock.

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Therio Service Spotlight Continued

What We Offer: Comprehensive Reproductive Services

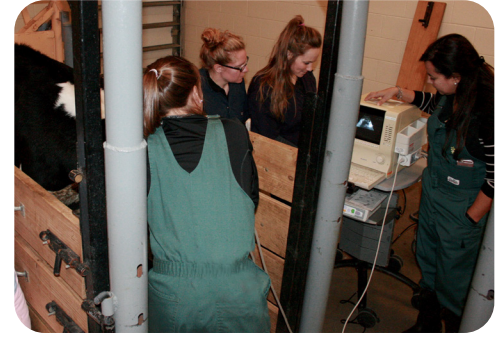
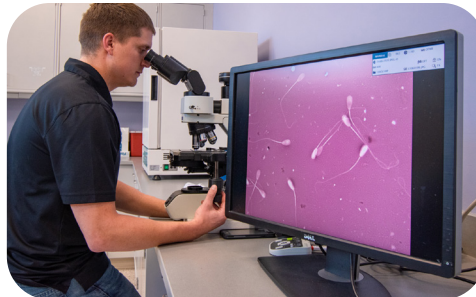


SMALL ANIMAL THERIOGENOLOGY

- Breeding management, including progesterone monitoring, vaginal cytologies, and trans-cervical insemination with fresh, cooled, or frozen semen
- Male fertility evaluation, semen shipment, and cryopreservation
- Pregnancy diagnosis and monitoring
- Emergency and scheduled cesarean sections
- Postpartum care and reproductive issue management, including pyometra, mismating, metritis, and prostatitis
- Gonad-sparing surgical procedures, including ovary-sparing spays and vasectomies

EQUINE THERIOGENOLOGY

- Foaling management for routine and high-risk pregnancies
- Routine breeding management using fresh, cooled, or frozen semen
- Embryo recovery, transfer, and cryopreservation
- Pregnancy diagnosis and management
- Breeding soundness evaluation for mares and stallions
- Infertility workup and treatment in mares and stallions
- Semen collection for evaluation, shipment, and cryopreservation
- 24/7 emergency care for dystocias and postpartum complications
- Post-mortem oocyte and semen recovery



FOOD ANIMAL THERIOGENOLOGY

- Calving management for routine and high-risk pregnancies
- Embryo recovery, transfer, and cryopreservation for cattle and small ruminants
- IVF services for cattle, including aspirations for fresh transfers or cryopreservation
- Pregnancy diagnosis and management for food animal species
- Routine breeding soundness exams for bulls, rams, and bucks
- Medical and surgical management for bull breeding injuries
- Cryopreservation of semen with options for storage or shipment
- Infertility workup and treatment for males and females
- 24/7 emergency care for dystocias and postpartum complications
- Post-mortem semen recovery

Therio Mission: *We are proud to support our colleagues, clients, and producers in achieving their reproductive goals. Whether it's a high-performance breeding program, a long-awaited pregnancy, or a critical dystocia case, our team is here to help.*

Vet Pulse

VetPulse is published by the LVMC for referring veterinarians.

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Ideas for future topics can be directed to Tracy Raef, traef@iastate.edu.

Clinical Trial - Free MDR1 Testing for Dogs

The Anesthesia service is offering genetic testing for dogs at risk for the multidrug resistance mutation 1 (MDR1). This gene can cause increased sensitivity to common drugs such as flea preventatives and anesthetics. The mutation is most often seen in herding breeds but can be found in any dog. Testing consists of two simple cheek swabs. Positive dogs will be asked to enroll in a multi-part sedation study and will receive complimentary bloodwork.

Visit the [MDR1 Clinical Trial page](#) to see if your dog qualifies.

For more information, contact Dr. Bonnie Hay-Kraus (bhkraus@iastate.edu) or Dr. Kristen Deom (kdeom@iastate.edu).



NEWS FROM SERVICE UNITS

Anesthesia

In January, the Anesthesia service unit welcomed its fifth faculty member,

Dr. Martin Suarez.

Dr. Suarez is a veterinary anesthesia specialist with academic and clinical expertise. He earned his DVM degree from the University of La Plata in Argentina, followed by a Master of Science in Anesthesia from the University of Pretoria in South Africa. Dr. Suarez then completed an anesthesia residency at the University of Tennessee's College of Veterinary Medicine, where he also served as a clinical instructor. He later held a similar role as a lecturer and assistant professor at Washington State University. Currently, Dr. Suarez is a Clinical Associate Professor of Anesthesia..



The Anesthesia unit is expecting maintenance and repair of its piston-driven large animal ventilator, the Tafonius. This ventilator provides precision-controlled ventilation to large and small animals in the large animal hospital, with the position of the piston—and therefore tidal volume and airway pressures—adjusted approximately 200 times per second. Anesthesiologists and anesthesia technicians who utilize the Tafonius are afforded the opportunity to more precisely titrate ventilation and have more flexibility in methods employed to treat and prevent hypoxemia under anesthesia.

A shipment of donor-funded MRI-safe syringe pumps is expected soon. Ensuring patient safety and optimizing efficiency are critical components of delivering high-quality anesthesia care. MRI-compatible syringe pumps play a vital role in maintaining these standards during anesthesia cases that require imaging. These pumps are specifically designed to function safely within the powerful magnetic fields of MRI environments, preventing potential hazards caused by non-compatible equipment. Furthermore, these pumps can provide more accurate dosing of drugs that are essential to a smooth, efficient, and safe anesthetic process, often in patients requiring high levels of care to preserve physiologic function.

Ophthalmology

The Ophthalmology service is excited to offer photodynamic therapy as a new adjunctive treatment for horses with ocular surface or periocular squamous cell carcinoma (SCC). Squamous cell carcinoma is the most common ophthalmic neoplasia in horses and may affect the eyelids, third eyelid, conjunctiva, and/or cornea. Risk factors for the development of SCC include:

- Decreased skin pigmentation
- Increased age
- UV light exposure
- Breed predisposition

Photodynamic therapy is highly successful in preventing SCC recurrence in horses after surgical removal. This therapy uses light and light-sensitive compounds in an oxygen-rich environment to cause local tissue necrosis.

We use a photoreactive agent, infracyanine green (EmunDo®), that is either injected into the eyelids and/or painted onto tissue (cornea or conjunctiva) and then activated by an 810 nm diode laser (F.O.X. laser), resulting in the production of reactive oxygen species and leading to subsequent cell death.

Surgical debulking with adjunctive photodynamic therapy can often be performed under standing sedation, which has reduced anesthetic risks for equine patients. However, for more advanced SCC lesions, general anesthesia may be recommended to provide the best surgical and overall clinical outcome.

Equine ophthalmology consultations are scheduled on Tuesday and Thursday afternoons. Surgery for squamous cell carcinoma resection with adjunctive photodynamic therapy can be coordinated after initial consultation with the Ophthalmology service.

For more information contact the Ophthalmology service at 515-294-1500.

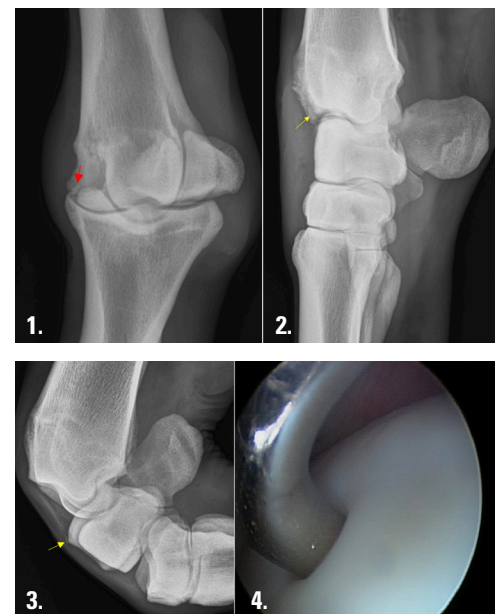


Photodynamic therapy

Equine Surgery

The Equine Surgery service offers standing arthroscopy for certain bone chips in the fetlock (picture 1), carpus (pictures 2-3), or diagnostic arthroscopy of the stifle (picture 4). Using regional anesthetic (nerve blocks) and an arthroscopic nanoscope (Arthrex®, Naples, FL, USA), these arthroscopies can be performed in suitable horse candidates without the need for general anesthesia.

If you have a patient with any of these problems within its joints, please reach out to the Equine Surgery Service at 515-294-1500 to determine if your patient is a suitable candidate for the procedure.



DIRECTOR'S MESSAGE

Chad Brown, DVM, Executive Director, Lloyd Veterinary Medical Center

Dear Colleagues,

I'm grateful for the opportunity to introduce myself as the new Executive Director of the Lloyd Veterinary Medical Center. I began in this role on November 18, and while I've only been here a short time, it's already clear that this hospital holds a special place in the lives of the animals, clients, and veterinary professionals we serve.

The LVMC has a long-standing tradition of excellence in both primary and referral care. It's an honor to join a team so deeply committed to compassionate service, clinical expertise, and the training of the next generation of veterinary professionals. My role is to support this mission—and to ensure that we continue to meet the needs of you, our referring partners, with responsiveness and collaboration.

By way of background, I've spent much of my career in clinical practice, veterinary education, and program leadership. For many years, I owned and operated a 50/50 mixed animal practice, serving both large and small animal clients in a rural community. More recently, I served as Director of Veterinary Nursing Programs at Purdue University, working with both on-campus and distance learning students across the country. I've also remained involved in agriculture through my family's cattle farm in West Virginia.

As I settle into this role, my top priority is listening and learning. If there are ways we can better support you and your patients, I hope you'll reach out. Our goal is simple: to be a trusted extension of your practice and a reliable partner in the care of your clients.

Thank you for the work you do—and for allowing us the opportunity to work alongside you.

Chad Brown, DVM

Executive Director, Lloyd Veterinary Medical Center



CAT CALL!

The Internal Medicine Service is currently recruiting cases for a clinical research project assessing bile acid dysmetabolism in cats with chronic enteropathy. We are seeking your assistance in enrolling cats that have been experiencing symptoms such as diarrhea, vomiting, decreased appetite, and/or weight loss for over three weeks.

As part of the study, blood and stool samples will be collected during the cat's normal diagnostic workup for chronic gastrointestinal disease. There is no cost to owners participating in the study, and complimentary food will be provided for the duration of the trial.

For further information about the study, please contact Dr. Al Jergens at aljergens@iastate.edu or Dr. Mara Merodio at mmaria@iastate.edu.



UPCOMING EQUINE WEBINARS

- **April 30 - Understanding Confirmation From A Farrier's Perspective**
[Register for Farrier Webinar](#)
- **May 28 - Common Causes of Lameness in the Horse**
[Register for Lameness Webinar](#)