

IOWA STATE UNIVERSITY

*gentle*doctor

COLLEGE OF VETERINARY MEDICINE FALL/WINTER 2015 | VOL.29 NO. 2



Heart Matters

gentledoctor

FALL/WINTER 2015 | VOL.29 NO.2

Gentle Doctor is published by the Iowa State University College of Veterinary Medicine for alumni and friends of the college. The publication of the magazine is funded by the College of Veterinary Medicine and the Veterinary Medical Alumni Association at Iowa State.

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On the Cover

Drs. Peter and Libbey Schmitt with son, Liam. Story on page 4.

Photo: Christopher Gannon

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Dear alumni and friends,

On more than one occasion, I have been told by a producer that if a natural disaster were to strike Iowa State University, the Veterinary Diagnostic Laboratory in the College of Veterinary Medicine would be their number one priority to get operational again.

While we all hope that day never comes, that statement speaks volumes for how the state, its elected officials, veterinary community and the agriculture industry feel about the VDL. It is that important.

Over the past several years, the VDL has reached record volumes and a sustained trajectory in growth in caseload and fee income. As Iowa's only full-service, fully accredited veterinary diagnostic lab, the VDL has more than 75,000 cases each year and conducts 1.5 million tests every 365 days. That is why our VDL is number 1 in case numbers among all veterinary college VDLs in the country.

And, when disease problems for the animal industry get their hottest, the lab gets their coolest ... churning out desperately needed results on a 24/7 basis. This effort reflects the devotion to service of the lab's employees. If you have a problem, they will be there helping you every step of the way.

Of course, it is not only the volume of work they do that is impressive, but the type of cases and tests that are important to Iowa and the agriculture industry. The VDL was the first lab to identify cases of the Porcine Epidemic Diarrhea virus in this country and this past spring continued to play a national leadership role in helping veterinarians and producers deal with the devastating outbreak of High Pathogenic Avian Influenza. The lab was a critical resource in testing, analyzing and providing general information about the disease.

In addition to the highly valued service the lab provides to veterinarians, livestock and poultry producers and pet owners, the lab's rich mixture of front line cases is a world class learning opportunity for our veterinary and graduate students.

And what is even more amazing is that our VDL faculty and staff are conducting cutting-edge, DNA-based diagnostics in a building built not very long after the DNA molecule was understood, before PCR was invented, and when Iowa's animal agriculture was a fraction of the size it is now!

Indeed, in the '70s, the college only needed 10 faculty and 20 technicians to service Iowa and the nation's animal agriculture needs. Today, the college employs 23 faculty and 105 technicians in a building that just was not built for today's molecular age.

In keeping with the VDL's 'can-do' spirit, the faculty and staff have performed miracles in order to overcome workflow and space challenges and to deal with concerns for biocontainment and biosecurity in order to provide the high-quality service their clients have come to expect. But, clearly, the time is approaching where a more comprehensive solution to these concerns is needed. That is why the college and Iowa State are beginning to look to building a new VDL. The new facility is still in the very early planning stages and is subject to Board of Regents and Legislative approval, but I am hopeful about the future.

The proposed \$120 million project would be the biggest non-athletic capital project in the university's history and will be constructed to dramatically improve the VDL's capabilities to meet future challenges – challenges like the PED and HPAI outbreaks.

And just as importantly, the college will be able to take the 50,000 square feet currently allotted to the VDL and repurpose it for much-needed research facilities, student learning spaces and state-of-the-art laboratories. This is a clear win-win for not only the college, but all those we serve.

Best regards,



Lisa K. Nolan, DVM, PhD

Dr. Stephen G. Juelsgaard Dean of Veterinary Medicine
Iowa State University



Photo: Paul Gates



A Matter of the Heart

By Tracy Ann Raef

Peter and Libbey Schmitt were second-year veterinary students in the fall of 2012. A young married couple, expecting their first child, their life was already busy with the normal routine of schoolwork and family. Unaware that their lives would soon change in ways that would test them individually and as a couple.

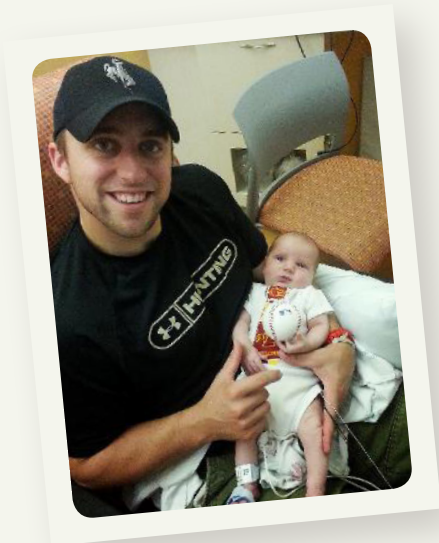
During a routine examination, Libbey's obstetrician discovered an abnormality during the ultrasound and referred Libbey to a high-risk pregnancy clinic in Des Moines with advanced ultrasound equipment. There, the couple was told their unborn child (Liam) was missing a ventricle and needed to see a specialist. Two days later they drove to the University of Iowa Children's Hospital, where Liam was diagnosed with tricuspid atresia, with transposition of the great vessels (the aorta and pulmonary artery are switched), coarctation of the aortic arch (narrowing of the aorta) and a ventricular septal defect (a hole in the wall that separates the heart's lower chambers). It was Valentine's Day 2013, and week 20 of Libbey's pregnancy.

Now What?

"It was incredibly overwhelming," Libbey said of the diagnosis. "We were so excited to learn we were pregnant and had just started sharing the news." Her first thought was to wonder what she did wrong. "I knew this had to be my fault, then I realized it wasn't." She got proactive, reading every piece of information about the condition, and researching which hospitals and doctors were best at treating this condition. "We wanted to make sure we did everything in our power to give him the best possible chance."

The Schmitts got a second opinion at the Children's Hospital of Wisconsin in Milwaukee, where doctors confirmed the original diagnosis. They decided to continue care at CHW because they have treated more babies with Liam's condition.

Libbey was induced on Sunday, June 16, 2013. Just before midnight on Monday the 17th, with a team of 12 doctors and nurses, Liam Ronald Schmitt was born. After a short time with his parents, Liam was moved into the Neonatal Intensive Care Unit.



Liam Schmitt holds a baseball that professional baseball player Mike Trout, Los Angeles Angels, threw to his dad Dr. Peter Schmitt (pictured) during a Chicago Cubs game. Photo: Schmitt Family

Within hours, the cardiologist gave Liam an echocardiogram, and confirmed the diagnosis that Peter and Libbey had been given.

Decisions, Challenges and Obstacles

A week later, Liam had open-heart surgery to correct the transposition of the vessels, place an artificial shunt from the subclavian artery to the pulmonary artery and widen the hole between Liam's right and left atrium. Liam's care initially required that he stay in the hospital until late July, which didn't conflict with veterinary school. But, decisions had to be made.

"We sat down with Drs. Claire Andraesen (associate dean for student programs) and Monica Howard (director of student programs) when we returned to Ames," Libbey said. "Everything was on the table. We discussed discontinuing our education, both of us taking a year off, one of us taking a year off, or continuing as planned knowing that it would be extremely difficult." With the full support of the college leadership and their professors, the Schmitts decided to continue with veterinary school.

There were plenty of challenges along the way. The first day of the fall semester 2013, Libbey and Liam were taken by helicopter back to Milwaukee so doctors could perform the second surgery. Liam had outgrown the shunt placed in the first surgery. "That was a good thing. Liam was growing at an astounding rate for a baby with a heart condition," said Peter, who drove up while Libbey and Liam flew.

Peter and Libbey were able to keep up with lectures, which are all recorded with technology installed in the classrooms several years ago. They were also allowed to reschedule exams, and submit a few assignments via email

while they were in Milwaukee for a month. When they returned to Ames, a nurse watched Liam during the mornings, and they signed up for different labs so one of them could be with Liam every afternoon. Libbey's mom would babysit to help give them time to prepare for exams, and Peter's mom would drive from Dubuque and stay a few days when they needed the extra help. Friends from church and school would help, too.

Their fourth-year of veterinary school was more difficult to manage, especially the summer. Sometimes, Liam sat in on rounds, and classmates took him on stroller rides while Peter and Libbey finished up with patients and paperwork. "We could not have managed without our classmates, and the understanding of everyone in the hospitals," Peter said. "And, our class was like one big family coming together and everyone pitching in when we needed it. Every single one of them has our deepest gratitude."

In the fall of their fourth-year, Liam was accepted into a day health-care program where a nurse and care provider were available all day.

The biggest challenge, says Libbey, was that we wanted to put the time into classes and our rotations so we could be great doctors while at the same time wanting to be great parents. "We had to make some sacrifices, mostly sleep, to excel in both," they said.

DVMs, Jobs, and Childcare

Juggling careers and health care for Liam is a bit more straightforward now after graduating in 2015. Peter is an associate veterinarian at GGS Genetics, a cattle embryo transfer and IVF clinic based in Lansing, Mich. He doesn't have emergency or weekend duty. Libbey is at BluePearl Veterinary Partners in the Detroit metro where



Liam, almost two years of age, with mom Dr. Libbey Schmitt during an outing.
Photo: Schmitt Family

she is completing a small animal rotating internship. A nanny comes to the home Monday through Friday to care for Liam. "We plan our schedules so we can spend as much time as possible for family activities – trips to the zoo, parks, and an area apple orchard/pumpkin patch," Libbey adds.

Life Lessons

"On our first day in the hospital, our nurse told us, 'This will either make your marriage stronger, or it will tear it apart. It's up to you.' We knew we had to face problems as a team or we wouldn't make it," Libbey said.

Along the way, the couple learned there wasn't a problem too big to tackle, as long as they did it together. "We realized how little control we had over things, which taught us to attempt to control what we can, and not worry about what we couldn't. We put our faith in God, and trusted in His plan for us," Peter said.

Would they do anything different? "Not a chance," Libbey said. "Liam has taught us so much and brought so much joy to our lives. Everything happens for a reason," Peter said. **gd**

Practice Makes Perfect

By Dave Gieseke

Sit back and imagine doing anything for the very first time. Chances are you might be just a little unsure of yourself and nervous.

Add a live animal and a syringe to the mix and chances are very good you'll have a very nervous veterinary student.

"The first time our students work on a live patient, many of them are extremely nervous and are still that way the first few times they do a procedure," said Dr. Stephanie Caston, assistant professor of veterinary clinical sciences and section leader in equine surgery. "Most are worried they will hurt the patient. We want to make sure they are confident and get it right."

Now the College of Veterinary Medicine may have an answer to this age-old dilemma. The new Clinical Skills Laboratory in the college has been established with the goal of providing opportunities for students to become more confident about any number of procedures.

"One of the biggest benefits to the Clinical Skills Lab is reducing the risk, not only to the patient, but to the veterinary student," Caston said. "Before they even work on a live animal, they could potentially have hundreds of exposures to any number of medical techniques.

That's where the Clinical Skills Lab comes into play. Designed for students to refine a variety of clinical and technical skills, students can perform physical examinations, surgical and anesthetic procedures, catheter placement and venipuncture on models and simulators.

The lab provides a safe, low-risk environment for students to improve their competency in any one area while supporting self-directed and mentored learning, as well as organized labs utilizing medical simulators and models.

"We believe that students will develop better motor skills and increase their hand-eye coordination in the lab," Caston said. "By offering this we are providing multiple opportunities for our students to develop these skills and hopefully, becoming more confident."

Even in its infancy, the lab is already well stocked.

- An equine head/neck simulator provides students with vascular access to practice blood draws from the jugular vein and facial sinus;
- Canine foreleg vascular access simulators allow students to practice IV catheter placement and venipuncture of the cephalic vein. There is a similar alpaca head and neck model;
- Students can practice suture placement and various suture patterns on simulated skin pads;
- Computer simulators have real-time anesthesia simulations requiring correction of patient abnormalities.

Then there is "Frosty." The life-size Holstein dystocia simulator comes with a fully articulated 70-pound calf and working udder. "Frosty" dominates the Clinical Skills Lab and will give birth thousands of times in her lifetime, all while not creating any risk to students, the cow or the calf.



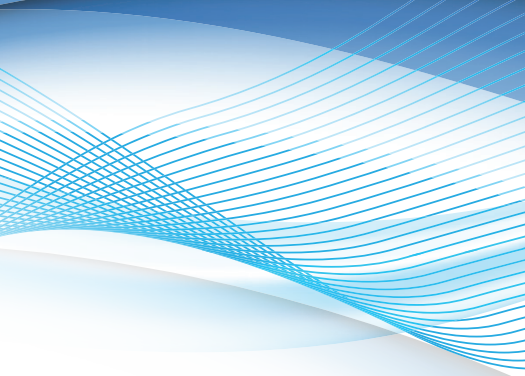
Jennifer Ruff ('18)
demonstrating canine
resuscitation simulator.
Photo: Heather Brewer

GIFTING OPPORTUNITIES

If you are interested in supporting the Clinical Skills Laboratory, please contact the Veterinary Medicine Development Team:

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Canine spay simulator models.
Photo: Heather Brewer



Dr. Stephanie Caston with equine models and simulators.
Photo: Heather Brewer



Elizabeth Nielsen ('18) uses the small intestine simulator to practice suturing.
Photo: Heather Brewer



From left: Marjorie Clark ('16) and Caitlin Murphy ('16) with Holstein dystocia simulator.
Photo: Paul Gates

*"Frosty" was made possible through donations from Dr. Paul Armbricht ('71), Lake City, Iowa; Dr. Scott Armbrust ('75), Green Bay, Wis.; Dr. John Kurt ('75), Paririe du Chien, Wis.; and Dr. Dan Smith ('75), Montrose, S.D. Additional funds were provided by the ISU Department of Veterinary Diagnostic and Production Animal Medicine.

"I don't have a lot of bovine experience so the cow model is a great way for me to learn," said Jennifer Ruff, a second-year veterinary student. "The model also has a pelvic bone model so you

can actually feel the bone structure, making it a lot easier for me to figure out how to work around that.

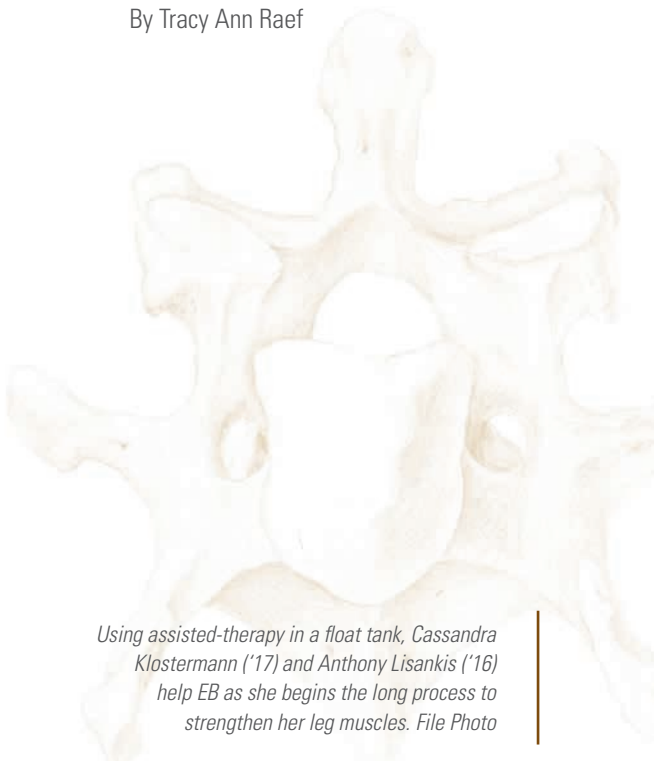
"We (veterinary students) have so much enthusiasm. We all want to touch live animals. But this is a great way to channel our enthusiasm and not be scared to do these procedures." Future plans for the lab include incorporating its usage into classroom curriculum and the addition of more models and simulators through private donations.

"The Clinical Skills Lab is not going to replace all live animal experiences for our students," Caston said. "But I believe it will make our students more efficient and effective when they are working with live patients." **gd**

**Editor's Note: This online version of the story has been corrected to show the additional donors to the life-size Holstein dystocia simulator.*

Surgeons Team Up to Repair Cervical Vertebrae of a Calf

By Tracy Ann Raef



Using assisted-therapy in a float tank, Cassandra Klostermann ('17) and Anthony Lisankis ('16) help EB as she begins the long process to strengthen her leg muscles. File Photo



Dr. Jennifer Schleining, board-certified large animal surgeon in the Department of Veterinary Diagnostic and Production Animal Medicine, examined her new patient, a calf named EB (short for Easter Bunny). Owner Travis Jones noticed that a couple weeks after birth, EB started having trouble standing and walking. After treatment by the local veterinarian, EB was able to walk for a brief time, but then again she lost the ability to walk or stand.

Jones has always been partial to black baldy calves (a combination of breeds that produce the signature white-face black calf). Jones started raising cows eleven years ago, when he got his first three cows as a wedding gift. Today there are 375 cows in the herd, and each is home-raised. “The farm is where our heart’s are,” Jones said. “EB was friendly, alert, and such a great calf. I wanted to know what was wrong with her, whether she had a virus or perhaps white muscle disease. So, we took her to Iowa State.”

A diagnostic work-up including a complete blood and mineral panel didn’t show anything significant. EB’s appetite was strong and her behavior was normal.

Radiographs were taken of EB’s cervical spine. Looking at the radiographs, Schleining could see that the fourth vertebrae (C4) was abnormal, an osteolytic lesion (an area of bone loss) within its center. Schleining knew that a biopsy was needed to further evaluate the cause of the lesion.

“The spinal column is made up of a series of bones (vertebrae),” Schleining

explains. “And, the spinal cord passes through a hole in the center of each vertebrae. I wasn’t comfortable doing a biopsy so close to the spinal cord.” Luckily EB was at the teaching hospital where there are experts in just about every discipline of veterinary medicine. Schleining walked down the hallway to the small animal hospital to consult with ISU neurosurgeon Dr. Nick Jeffery.

“I was intrigued by the challenge of working on a calf,” Jeffery said. “I’ve done numerous CT-guided biopsies and thousands of surgeries on companion animals, but never on a calf.”

Jeffery performed the CT-guided biopsy, which confirmed that the lesion was caused by an infection. Not only would the infection need to be treated, but the vertebrae would need to be stabilized to prevent it from collapsing on the spinal cord because of the erosion of the C4 vertebrae. EB would need stabilizing surgery, commonly performed on dogs with spinal injuries.

“There was no reason to believe that the surgery wouldn’t work on EB,” Jeffery said. “But I needed Dr. Schleining’s large animal expertise to do it.”

Jeffery added that because he would be performing the operation on a calf, rather than a dog, he had to re-think every aspect of the surgery from the beginning. What was routine for him, was now not-so-routine.

“For instance,” said Jeffery, “the individual vertebrae along the neck and spinal column of a dog can be easily identified because they have

“The level of communication between both the large animal surgeon and small animal neurosurgeon was incredible. Both yielded to the other’s expertise for the best outcome for the patient.”

– Anthony Lisankis ('16)

landmarks. In the calf, the anatomy is so different. There aren't any clear landmarks in the middle of the neck. Even handling the tissue would be different.”

Jeffery leaned on Schleining’s knowledge not only regarding anatomy, but also in treating the infection.

“Dr. Schleining made beads of plaster of Paris that were impregnated with an antibiotic, ampicillin, which were inserted through a slot we made on the underside of the neck bones during the surgery,” Jeffery said.

“In addition to treating the infection systemically via more traditional routes, the use of the beads would allow the antibiotic to reach the site of the infection,” Schleining said. “The plaster of Paris is biodegradable so as it degraded, the antibiotic would be released.”

During the surgery, Jeffery attached metal plates to the sides of vertebrae C3 and C5, to stabilize C4, which had become unstable as a result of the infection.

The surgery was successful, but EB still had a long road to recovery. The calf needed rehabilitation to rebuild her leg muscles. Working with ISU canine rehabilitation specialist Joanna Hildreth, Schleining adapted techniques commonly used to rehab dogs recuperating from spinal surgery. “Several times a week we would place EB in the large animal float tank so her weight could be supported as she built muscle mass,” Schleining said.

Later, EB would move to assisted-walking outdoors. “We placed EB in a cart designed to support an animal’s weight while still allowing it to put some weight on its legs,” Schleining said. “Of course we don’t have rehab equipment specifically made for a cow so the cart that we used was for large dogs such as Great Danes. The students would walk her outdoors,” Schleining said. “From Dr. Jeffery’s office, he has a view of the area where we would walk her. He’d come down and walk with EB and the students.

“It was amazing,” Jeffery said.

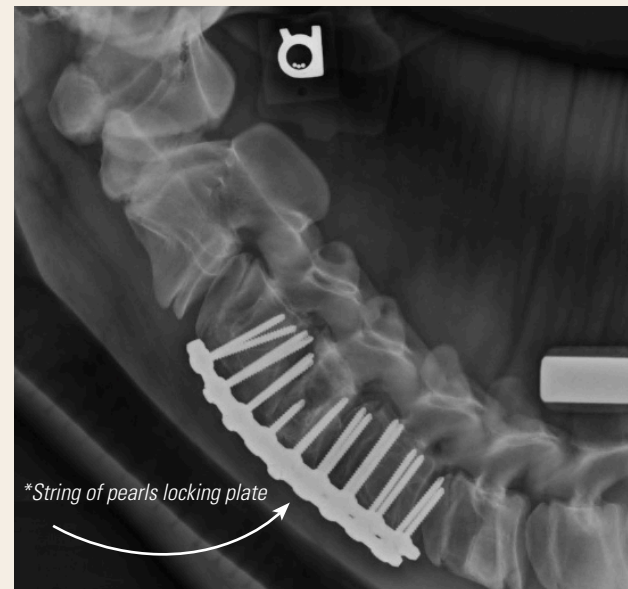
For Anthony Lisankis, a fourth-year student who was on the neurology rotation and food animal medicine rotations while EB was a patient, “The level of communication between both the large animal surgeon and small animal neurosurgeon was incredible. Both yielded to the other’s expertise for the best outcome for the patient.”

“We collaborated on how we could treat EB, and adapted treatments that we are familiar with to produce a result that we wouldn’t have normally been able to do,” Jeffery said.

For EB, it was the best of small animal and large animal medicine.

“EB is alive today because of the dedication of the Jones family,” Schleining said. “The care and attention she received before coming to Iowa State University and the care she continues to receive at home after surgery is a testament to the responsibility the Jones family feels

to ensure their herd is healthy and happy. When Travis told me that the family wanted to bring a load of hay to donate to the hospital when they picked up EB, I couldn’t have been more surprised. Not only was the trailer full of hay, it was full of the best quality hay our patients could have wished for! They are grateful clients, but I’m sure I speak for everyone that was involved in EB’s care when I say that we are grateful for the opportunity and the experience to see such a special patient walk onto her trailer to go home.” **gd**



*One of the inventors of the SOP is ISU's chief of surgery, Dr. Karl Kraus.



Veterinary Researchers Discover Mystery Virus That Causes Tremors in Piglets

By Fred Love

ISU veterinary researchers (from left) Drs. Drew Magstadt, Kent Schwartz, Paulo Arruda and Bailey Arruda worked to pinpoint a pestivirus that causes congenital tremors in young pigs. Photo: Christopher Gannon

A team of veterinary researchers at Iowa State University has pinpointed a virus that has caused mysterious tremors in piglets dating back decades.

The virus, which comes from a family known as ‘pestiviruses,’ infects young pigs and can cause them to shake involuntarily. Afflicted piglets are sometimes referred to as “shaker pigs” or “dancing pigs,” and, in severe cases, the tremors prevent pigs from nursing and can lead to starvation.

Veterinarians have recognized the congenital tremors for years but could never pinpoint the cause until now, said Dr. Bailey Arruda, an assistant professor and veterinary pathologist in the ISU Department of Veterinary Diagnostic and Production Animal Medicine.

“It’s been a mystery in the veterinary community for over 90 years,” Arruda

said. “Unfortunately, we didn’t have the technology to find the virus before.” The team of researchers, in collaboration with Missouri-based animal health company Boehringer Ingelheim Vetmedica, utilized next-generation DNA sequencing techniques to detect the virus in samples from affected pigs. The team then used those results to experimentally reproduce the tremors in newborn pigs.

Earlier sequencing techniques, such as polymerase chain reaction or PCR, require researchers to identify a target before beginning the process. “But that approach wouldn’t be useful in this case because we didn’t know exactly what we were looking for,” Arruda said.

Now that the researchers have identified the virus, she said the ISU Veterinary Diagnostic Laboratory can now use PCR tests to confirm cases from samples sent in from local

veterinarians. And the next step is to develop a vaccine to combat the virus, she said.

Dr. Paulo Arruda, an assistant professor in veterinary diagnostic and production animal medicine, said piglets with congenital tremors are fairly uncommon, though the virus can appear in cycles. While the virus isn’t creating widespread problems for the pork industry, it can become particularly problematic on individual farms, he said.

Dr. Drew Magstadt, a clinician in veterinary diagnostic and production animal medicine and research team member, said the virus doesn’t make pork unsafe to eat, and he stressed that the virus isn’t known to infect humans. [gd](#)

Beyond the Projector and Magic Marker Veterinary Pathology Teaching Laboratory Transformed

By Tracy Ann Raef

Teaching methods and delivery evolve over time ... the Magic Marker is now a Sharpie and lectures that once missed, couldn't be recovered, are now recorded for viewing anytime/anyplace.

Something that hasn't changed, though, is the teacher's desire to teach, and the student's desire to learn. So when remodeling of the college's veterinary pathology teaching laboratory began, it was important to create an environment that supports teaching and learning.

"The pathology lab was originally constructed as a generic lab with gas and air jets more commonly used in a chemistry lab," said Dr. Joe Haynes, chair of the Department of Veterinary Pathology. "As we planned the renovations, we got rid of everything that we were not using, leaving us with a space that we could tailor to meet the needs of a pathology teaching lab."

Teaching pathology is descriptive and visual, so many renovations were made to help students better see the different gross, microscopic and molecular images. A new microscope camera was installed along with high-definition projectors. "Our old projector was outdated," said Dr. Amanda Fales-Williams, associate professor of pathology. "Now we have much better optics which provide a higher level of detail when projecting images on the screens. With the digital technology,

students are able to capture the image on their laptops and write notes on the image."

The green cabinets and dull wall colors have been replaced by neutral and natural colors which "brings a more professional atmosphere," Fales-Williams said. "And, the lighting in the lab is much improved."

Renovations also included changing the orientation of the room to face the hallway (south). "This reconfiguration puts more stations closer to the front of the room, and stations in the back are elevated so students can see the front of the room better," Haynes said.

Originally built to hold 64 students – 16 stations with four seats built into the cabinetry – the lab now has 18 new stations (for a capacity of 72 students) with stand-alone chairs that are more ergonomically sound.

"The lab is much more functional now," says Marley Dobyms ('18). "The orientation of the projectors is much easier to see from all sides of the room, and what used to be the main bench on the east side has been opened up for more counter space, which eliminates much of the congestion during labs and exams."

Wall cabinets that were no longer functional were replaced with wall racks to hold student backpacks and coats. "I think most students enjoy having a spot for their belongings to keep them out of the way," Dobyms said. For faculty like Fales-Williams, the wall racks allow her to move around the room more freely and help students individually.

"Overall, the lab now provides a nicer environment for learning and teaching, and I'm thrilled to be able to help students in this new environment" Fales-Williams said. **gd**



Second-year veterinary student Marley Dobyms (white lab coat) looks at specimens in the remodeled teaching laboratory.
Photo: Heather Brewer

Distinguished Alumni Recognized

By Tracy Ann Raef

Four alumni of the College of Veterinary Medicine were honored on Oct. 30, 2015. Recipients of the Stange Award for Meritorious Service and the William P. Switzer Award in Veterinary Medicine were recognized at an all-college breakfast at the Gateway Hotel, and later at the university awards ceremony at Scheman Building. The awards were presented by Dr. Lisa K. Nolan, professor and *Dr. Stephen G. Juelsgaard* Dean of Veterinary Medicine.

The Stange Award for Meritorious Service is presented annually and recognizes alumni for outstanding professional achievements. The 2015 recipients are Drs. Marion Anders, Kenneth Harkin, and Howard Moore.

Dr. Marion W. Anders ('60) is an international leader in the fields of biochemistry and physiology of drug and other xenobiotic metabolism.

The novelty and practical implications of his research resulted in two U.S. patents related to drug therapy and mitochondria. He is a professor and chair emeritus at the University of Rochester (N.Y.) Medical Center.

Anders has spent his professional career as a scientist, professor, and mentor making significant advancements in the both the human and veterinary medicine fields. Although a veterinarian by training and education, he never stayed in his comfort zone—pursuing problems and techniques outside his formal training.

He has approximately 300 peer-reviewed publications, approximately 100 reviews and book chapters, and four edited treatises. His work has earned him multiple awards, including a Merit Award from the Society of Toxicology in 2003, the Bernard B.

Brodie Award in Drug Metabolism from the American Society for Pharmacology and Experimental Therapeutics in 1999, and a Merit Award from the National Institute of Environmental Health Sciences from 1986-1996. A 2002 symposium hosted by the Center for Molecular Toxicology, Vanderbilt University, was held in his name. He earned his PhD from the University of Minnesota in 1964.

Currently, Anders' research is focused on the metabolism and toxicity of halogen- and sulfur-containing chemicals and on the design and synthesis of mitochondrially targeted drugs.

In summarizing Anders' career, a fellow researcher said: "The progression from veterinary medicine to pharmacology to chemist and the integration of these disciplines to solve scientific problems are hallmarks of his career."



2015 Stange Award recipients (from left): Drs. Kenneth Harkin, Howard Moore, and Marion Anders. Dr. Ron Grier is the 2015 recipient of the William P. Switzer Award. Dean Lisa K. Nolan presented the awards on Oct. 30, 2015. Photo: Christopher Gannon

Dr. Kenneth Harkin ('89) is currently a professor and section head of small animal medicine at the Kansas State University College of Veterinary Medicine's Veterinary Teaching Hospital. He is highly respected for his academic work in veterinary medicine in the areas of clinical service, teaching, and scholarship.

As an educator, Harkin excels in teaching in the classroom and in the veterinary hospital. He received the highest award for teaching, the Carl J. Norden-Pfizer-Zoetis Distinguished Teaching Award, in 2001, 2008, and 2013. In 2013, Harkin was also awarded the Dr. Ron and Rae Iman Outstanding Faculty Award for Teaching Excellence by Kansas State University.

In addition to providing exceptional education to students, Harkin has also made a strong impact through research and scholarship as well. He has made significant contributions to advancing the knowledge of leptospirosis, dysautonomia, and immune-mediated diseases. He is frequently asked to share his expertise at veterinary conferences and meetings.

In his service role at the college's teaching hospital, Harkin goes beyond the current standards of care in the treatment and care of hospital patients. He is well known for being an excellent role model to students for lifelong learning. He has personally attained the highest recognition of clinical competency in small animal medicine as a diplomate of the American College of Veterinary Internal Medicine.

Dr. Howard Moore ('74) has been a tireless advocate for the veterinary profession, with a distinguished record of accomplishments at the local, state, and national levels.

Moore began his career in a mixed animal practice in Minnesota from

1974-1977. In 1977, he relocated to the Tucson (Ariz.) Small Animal Hospital; a four-doctor, AAHA-accredited practice where he is currently senior partner.

He served as a director and officer of the Southern Arizona Veterinary Medical Association from 1983-1989 and as president in 1988; he was a director and officer of the Arizona Academy of Veterinary Practice from 1988-1992, serving as president in 1991; and he served the Arizona Veterinary Medical Association as a director and officer from 1990-1995, serving as state president in 1994. He was an alternate and delegate in the House of Delegates of the American Veterinary Medical Association from 2000-2009.

As a member of the Arizona Veterinary Medical Association Legislative Committee from 1989-2000 and the AVMA PAC Board from 2006-2012, Moore worked to advance legislative issues that positively affected animal health, organized veterinary medicine, and the veterinary profession. Moore served as AVMA PAC board chairperson in 2011. In 2013 he received the Russell Anthony Award from the AVMA's Governmental Relations Division.

Moore was Arizona's Small Animal Practitioner of the Year in 1996 and Arizona Veterinarian of the Year in 2000. In 2002 he received the Distinguished Service Award from the Arizona Veterinary Medical Association, and in 2011 was inducted with the inaugural group of four doctors into the Arizona Veterinary Medical Hall of Fame.

The William P. Switzer Award recognizes alumni and non-alumni of the college who have made significant contributions to society through their achievements, or have made major contributions to the

college. This year's recipient is Dr. Ronald Grier.

Dr. Ronald Grier ('65), Professor Emeritus in ISU's College of Veterinary Medicine, has had an influential impact on society and as an educator. His most significant impact was the creation of the college's Companion Animal Fund in 1984.

The funds contributed are from veterinarians in memory of a client's pet, which in turn creates the chain to have pet owners contribute to memorialize their pets as well. Since its inception, the Companion Animal Fund has accumulated a total of \$2.1 million. This number stands out because typical donations are \$5-\$10. Thanks to Grier's efforts, the Companion Animal Fund continues to provide financial support to the Department of Veterinary Clinical Sciences and the Lloyd Veterinary Medical Center.

Grier's research in humane euthanasia has made a positive influence on veterinary science, and pet and animal ownership/stewardship. With his published book *Euthanasia Guide for Animal Shelters* (3rd edition), co-authored by Tom L. Colvin with contributions by Lois N. Kopecky and illustrations by Caroline B. Shaffer, he has been able to influence, train, and educate animal shelters across Iowa and the United States.

In addition to his Companion Animal Fund success, Grier is an accomplished educator. He received the Regents Faculty Excellence Award in 1998 and the ISU Alumni Association Faculty Citation in 1995.

A colleague describes Grier as "an excellent surgeon, a tireless clinician-scientist, a great educator, a hard-working administrator, and a wonderful colleague who exhibits class and compassion to all." **gd**

NOLAN REAPPOINTED VETERINARY COLLEGE DEAN

Dr. Lisa Nolan, the Dr. Stephen G. Juelsgaard Dean of Veterinary Medicine, has been appointed to a new five-year term.

During her first term, Nolan was successful in increasing the college's budget, enhancing diversity and successfully completing several hospital and laboratory construction projects.

"Iowa State's internationally acclaimed programs in agriculture, biosciences and veterinary medicine are making transformative contributions to our state, nation and the world," said ISU President Steven Leath. "Lisa Nolan has done an outstanding job leading the college over the last five years and I look forward to continued growth."

Nolan, a professor of veterinary microbiology and preventive medicine, joined Iowa State in 2003. She earned her DVM, master's and doctoral degrees in medical microbiology from the University of Georgia. Nolan became dean in 2011 after serving as the college's associate dean of research and graduate studies.

"It has been incredibly gratifying to witness the growth of the college, from educating students, identifying pathogens for Iowa livestock producers, and taking care of animals around the world," Nolan said. "I look forward to our students, faculty and staff having an even greater impact in the future."



Mark Fitzsimmons, DVM, recipient of the Science with Practice Award.
Photo: Alex Ramirez

SCIENCE WITH PRACTICE AWARD

Mark Fitzsimmons, DVM, received the Science with Practice Award from Iowa State University's Veterinary Diagnostic and Production Animal Medicine Department. The award, presented at the 23rd annual James D. McKean Swine Disease Conference in Ames, Iowa, Nov. 5-6, recognizes exemplary integration of science and the art of veterinary practice to benefit swine productivity and welfare.

In presenting the award, Chris Rademacher, DVM, conference chair and ISU extension veterinarian said: "Dr. Fitzsimmons is an excellent example of a veterinarian who has a long-standing reputation among his colleagues here and abroad on how he uses science in his practice. His work on porcine reproduction and respiratory syndrome (PRRS) acclimatization of breeding herds in order to stabilize them is based on sound immunological principles and is used around the globe today to stabilize PRRS virus-infected herds."

A native of Minnesota, Fitzsimmons earned his doctorate of veterinary medicine (1987) from the University of Minnesota. After graduation, he worked for Swine Graphics Enterprises for 16 years. In 2003, he returned to his hometown of Mapleton, Minn., to work with his brothers at Protein Sources, a swine management company. Currently he is a private consultant with clients around the globe. He has authored several book chapters and peer-reviewed articles. In 2006 he was the recipient of the Practitioner of the Year Award by the American Association of Swine Veterinarians.

NOMINATIONS SOUGHT FOR AWARDS

The College of Veterinary Medicine invites nominations for the 2016 Stange Award for Meritorious Service and the William P. Switzer Award in Veterinary Medicine. Nominations will be accepted until Feb. 15, 2016. Nomination forms are available at www.vetmed.iastate.edu/alumni/awards-and-recognitions



Alumni Room Makeover

The college's alumni room received a makeover this fall.

Gone are the big sofas and chairs. Gone, too, is the carpet that always seemed to be a magnet for every cup of coffee.

Movable, space-sensitive furniture replaces the sofas and chairs. The furniture can easily be arranged to suit the purpose of the event. Several furniture pieces also serve dual purposes, either as sitting or work areas for laptops or plates of food.

The vinyl flooring that replaces the carpet is durable and can easily be cleaned between events.

"The challenge was designing for a multifunctional space," said Renee Knosby, director of operations at the College of Veterinary Medicine.

"With the new updates, the room can be effortlessly reconfigured for a small group meeting of faculty or larger departmental meeting, a gathering place for prospective students and their families during interviews, or a relaxing place for alumni and guests at Homecoming," Knosby said. "So far, the reviews on the furnishings have been positive, and it seems that in addition to being a multifunctional room, it's also comfortable and inviting to all who use it."

Photo: Heather Brewer



FACULTY ACCOLADES

- **Dr. Patrick Halbur**, professor and chair of the Department of Veterinary Diagnostic and Production Animal Medicine, received the Iowa State University Award for Achievement in Intellectual Property.
- **Dr. Locke Karriker**, associate professor of veterinary diagnostic and production animal medicine, received the 2015 ISU Award for Outstanding Achievement in Teaching.
- **Dr. Jim Toombs**, professor of surgery, was elected to serve on the Board of Regents of the American College of Veterinary Surgeons.
- **Dr. Michael Yaeger**, professor of veterinary pathology, received the 2015 ISU Regents Award for Faculty Excellence.

IOWA STATE UNIVERSITY

College of Veterinary Medicine

Ames, Iowa 50011

Return Service Requested



January 2016

North American Veterinary Conference Alumni Reception

Sunday, January 17
Orlando World Center
Marriott
Orlando, Fla.
7:00 p.m. to 9:00 p.m.

March 2016

Western Veterinary Conference

Alumni Reception
Monday, March 7
Mandalay Bay – Palm A,
Level 3
Las Vegas, Nev.
7:30 p.m. to 9:30 p.m.

April 2016

One Health Lecture

Tuesday, April 12
College of Veterinary
Medicine
Ames, Iowa
Speaker: Rod Page, DVM
Flint Animal Cancer Center
Colorado State University
5:00 to 6:00 p.m.

May 2016

College of Veterinary Medicine Commencement

Saturday, May 7
Stephens Auditorium
Ames, Iowa
12:00 p.m.

August 2016

American Veterinary Medical Association

Alumni Reception
Sunday, August 7
Hotel/Time TBD
San Antonio, Texas