

IOWA STATE UNIVERSITY

*gentle*doctor

COLLEGE OF VETERINARY MEDICINE SPRING 2018 | VOL. 32 NO. 1

A photograph of two veterinarians in a surgical setting. They are wearing blue scrubs, white gloves, and blue surgical masks. They are focused on a patient lying on a table, which is covered with a green surgical drape. The veterinarians are using surgical instruments, and a bright light is focused on the patient's face. In the background, there is a piece of medical equipment with a clock and various tubes.

**Building Skills
and Confidence**
One Suture at a Time

gentledoctor

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From the Dean

I recently attended the annual meeting of the American Public Land Grant Universities (APLU) in Washington, D.C. The theme of the meeting was “A Time of Disruption.” Our college has a strong foundation and I firmly believe that disrupting times can also be opportunities for institutions like ours to move ahead and further solidify our stature as a leader.

Here are just a few of the areas where we are moving the college forward during these challenging times in higher education...

- Our grassroots efforts will hopefully pay off with multi-year funding for a new Veterinary Diagnostic Laboratory. We are optimistic about getting \$3-5 million in planning money this year and Iowa Governor Kim Reynolds has included \$100 million (\$20 million/year for 5 years) for the VDL in the Rebuild Iowa Infrastructure Fund beginning in FY20. This will be a transformation occurrence for the VDL and college as it will also allow us to create much-needed research and student space in the current location of the VDL.
- We have substantially increased our student recruitment efforts over the past year and it is paying dividends. We received 300 more applications (32% increase) for next year's first-year class than we did the previous year. We clearly offer a quality education at a competitive price... our total cost of education is 26th for in-state students and 20th of 30 veterinary colleges for non-residents.
- We have substantially increased scholarships for incoming students (\$373,500 in 2018) by \$228,000 over last year and \$328,000 over the previous year.
- The rigorous accreditation process caused us to look closely at our teaching program. This process occurs every seven years. While we don't know the final results of the AVMA COE site visit, we are confident our college will receive good news about accreditation in the coming weeks.
- Our service units are strong. The Veterinary Diagnostic Laboratory was recently accredited by the American Association of Veterinary Laboratory Diagnosticians. The Lloyd Veterinary Medical Center is on its third consecutive year of 10%+ increase in caseload and was recently accredited by the American Animal Hospital Association.
- Construction is underway on phase 1 of the Comprehensive Pet Cancer Center. We hope to be treating patients in the new stereotactic radiation therapy unit this summer.



Photo: Christopher Gannon

- Thanks to you, our fundraising efforts continue to exceed expectations. We met our current fiscal year goal of \$10 million just seven months into the process. And we have raised over 83% (\$58 million) of our Forever True for Iowa State campaign goal (\$70 million), which doesn't end until 2020. You will enjoy several stories of alumni and friends giving back to our college in this issue of the *Gentle Doctor*.
- The college has very few open positions. We have filled 16 faculty positions since June 1, 2017. Our latest hire is Dr. Stephanie West, who began in April as the Director of Hospital Operations.
- We are working hard to improve diversity and inclusion. I hope you enjoy the feature on Dr. Frederick Douglass Patterson who is one of our most accomplished alumni. We are very excited to establish several awards and scholarships in his name.

I have been honored and privileged to serve as the interim dean of the College of Veterinary Medicine these past months and look forward to continuing to work for the college and university I love. The search for our next dean is continuing and I am committed to doing my best to work with the other college leaders to keep the college on an upward trajectory and position the new dean for success.

Thank you for your continued support and interest in our college.

Pat Halbur, DVM, MS, PhD

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

DEAN SEARCH TO CONTINUE

The Office of the Senior Vice President and Provost is continuing its search for the next dean of the College of Veterinary Medicine.

Nominations for the next dean are being sought with a tentative goal of interviews of finalists set for September 2018. Additional updates, including a finalized timeline, will be available in the coming weeks.

Dr. Pat Halbur ('86) will continue to serve as interim dean during the search process.



Photo: Heather Brewer

STEPHANIE WEST NAMED DIRECTOR OF HOSPITAL OPERATIONS

Dr. Stephanie West has been named the director of hospital operations for the Lloyd Veterinary Medical Center effective April 2.

West earned her DVM from Cornell University. She has a well-rounded background with experience in both small and large animal private practice. West previously worked for the Greater Buffalo (New York) Veterinary Services where she served as the hospital administrator for the Veterinary Emergency Clinic and as the executive supervisor for Veterinary Wholesale Supply.

West has experience teaching veterinary professional students at Lincoln Memorial University's College of Veterinary Medicine and serving as program director and professor in the veterinary technology program at Medaille College.

She replaces **Dr. Tom Johnson** ('71), who is retiring.

AGREEMENT SIGNED WITH CHINESE UNIVERSITY

The College of Veterinary Medicine and the Nanjing Agricultural University College of Veterinary Medicine have signed an agreement to create a clinical master's program between the two schools. Veterinary students at NAU will attend Iowa State after their fourth year at NAU and join the graduate program in either the Department of Veterinary Diagnostic and Production Animal Medicine or the Department of Veterinary Clinical Sciences. The clinical master's program will enhance clinical research at Iowa State and improve clinical skills of NAU students.

A similar agreement has been made with the National Chung-Hsing University College of Veterinary Medicine in Taiwan, Republic of China.



Photo: Misty Treanor

Pictured from the left are Dr. Pat Halbur, the Dr. Stephen G. Juelsgaard Interim Dean of Veterinary Medicine; Dr. Surha Mallapragada, associate vice president for research; Dr. Jianjun Dai, vice president of NAU; and Dr. Jiyong Zhou, dean of NAU's College of Veterinary Medicine.

LVMC BECOMES MEMBER OF ONCOLOGY TRIAL CONSORTIUM



The Lloyd Veterinary Medical Center has become a member of the National Cancer Institute – Center for Cancer Research (NCI-CCR) Comparative Oncology Trial Consortium (COTC).

The COTC is an active network of 23 academic comparative oncology centers that designs and executes clinical trials in dogs with cancer to assess novel therapies.

The trials are implemented through the collective caseloads of the consortium membership with trial oversight and data management provided by the CCR – Comparative Oncology Program.

The results of these pet animal trials will be rapidly translated into development plans for novel therapeutics, diagnostics and prognostics for human cancer patients. The data generated through these studies will be available to COTC members to facilitate larger investigator-initiated pet animal trials that may further complement this translational process.

“This will provide the LVMC with the opportunity to be involved in NCI-COTC clinical research studies along with several additional oncology research opportunities,” said **Dr. Chad Johannes**, assistant professor of veterinary clinical sciences. “Membership in this network is an important step in taking the hospital to the next level as the oncology program continues to grow at Iowa State.”

SITE VISIT COMPLETED; NEXT STEP ACCREDITATION

The AVMA Council on Education completed a week-long accreditation team site visit to the College of Veterinary Medicine Oct. 29 to Nov. 3.

In addition to the CVM campus, the site visit team toured and evaluated the University of Nebraska-Lincoln veterinary program and the college’s various affiliate facilities.

Every seven years, Iowa State undergoes an extensive review of its facilities and programs and is assessed on 11 standards including organization, finances, physical facilities and equipment, clinical resources, information resources, students, admission, faculty, curriculum, research programs, and outcomes assessment.

“I am extremely proud and appreciative of the time and effort put forth by our faculty, staff, students, alumni and friends in preparing for and executing the site visit,” said **Dr. Pat Halbur**, the Dr. Stephen G. Juelsgaard Interim Dean of Veterinary Medicine. “Although we do not know the final outcome, indications are that things went well.”

The final decision on accreditation will be made later this year.

RAMIREZ APPOINTED INAUGURAL HOLDER OF THE SCHULTZ PROFESSORSHIP

Dr. Alejandro “Alex” Ramirez,

interim assistant dean for academic and student affairs and associate professor of veterinary diagnostic and production animal medicine, has been named the first holder of the Roy A. Schultz Professorship in Swine Medicine.



Ramirez is a two-time College of Veterinary Medicine graduate. He received his DVM in 1993 and a PhD in veterinary microbiology in 2011. He is a Diplomate of the American College of Veterinary Preventive Medicine.

He joined the CVM faculty in 2004 after 12 years of professional swine veterinary practice. He has a productive record of clinical research and is an outstanding classroom instructor, receiving the Iowa State University Award for Early Achievement in Teaching. He is also a two-time recipient of the Dr. William O. Reece Award for Outstanding Academic Advising in the college.

He is the immediate past president of the American Association of Swine Veterinarians and serves as an AVMA COE Site Assessment Team member.

“Receiving this professorship is a tremendous honor for me,” Ramirez said. “I have always looked up to Dr. Schultz for his passion for seeking knowledge to help people, swine and the international community.”

The Schultz Professorship was established by **Dr. Roy Schultz** ('60), an internationally renowned swine veterinarian.

HONORS AND AWARDS

Dr. James Roth, Clarence Hartley Covault Distinguished Professor and Presidential Chair of Veterinary Microbiology and Preventive Medicine, has been named the 2018 recipient of the Association of American Veterinary Medical Colleges (AAVMC) Senator John Melcher, DVM Leadership in Public Policy Award. The award is given for leadership in public policy which advances veterinary medical education and for advocating for veterinary medical education on a national and international scale. It is named for former Montana U.S. Senator John Melcher, a 1950 Iowa State graduate. Roth serves as director of the Center for Food Security and Public Health and executive director of the Institute for International Cooperation in Animal Biologics.



The Iowa Veterinary Medical Association has recognized a pair of faculty members with awards at last fall's IVMA meeting. **Dr. Amanda Fales-Williams**, associate professor of veterinary pathology, and her husband Dr. Bill Williams, a small animal practitioner in Altoona, received the 2017 IVMA Veterinarian of the Year Award. **Dr. Tyler Dolman** ('09), assistant professor of veterinary diagnostic and production animal medicine, was the recipient of the 2017 Rising Star Award.

Rachael Ostrem, a second-year student from Radcliffe, Iowa, has been elected the national president of the Veterinary Business Management Association.

Dr. Melvin Hofstad (DVM '40) was recognized recently by the Iowa Turkey Federation with its Pioneer Award. The long-time CVM faculty member was honored for "his significant contributions to the Iowa turkey industry." Hofstad, who died in 1986, retired from Iowa State as a Distinguished Professor and was internationally known for poultry disease researching including contributions to the understanding of pathogenesis of infectious bronchitis.

Dr. Richard Martin, the Dr. E.A. Benbrook Endowed Chair in Pathology and Parasitology and Clarence Hartley Covault Distinguished Professor in biomedical sciences, has been elected a Fellow of The Physiological Society, one of the oldest scientific societies in the world which was founded in 1876 for the benefit and advancement of the physiological community.

VDL RECEIVES FULL ACCREDITATION

The Veterinary Diagnostic Laboratory has received full accreditation from the American Association of Veterinary Laboratory Diagnosticians, Inc. (AAVLD).

The VDL serves to protect animal and human health and advance the competitiveness of its clientele in a global marketplace. The team of 25 faculty and 127 technical staff process 75,000 to 85,000 case submissions and conducts more than 1.25 million diagnostic assays annually. The VDL is broadly recognized as one of the preeminent veterinary diagnostic labs in the U.S. and carries the largest food animal caseload of any veterinary diagnostic lab in North America.

"Full accreditation provides formal confirmation of the outstanding work the VDL and its employees do every day to deliver high quality test results and outstanding customer service to our clients," said **Dr. Rodger Main**, VDL director.

The site visit team reported significant concerns for the current VDL facility.

"The space and structural limitations of this aging facility combined with the rapid growth of the laboratory, will, in the opinion of this site team, limit the laboratory's ability to adequately respond to a large scale foreign animal disease outbreak," the report state .

The AAVLD conducted a site visit in August 2017. Full accreditation has been granted to the facility through Dec. 31, 2022.



The VDL: Industry-Focused, Client-Centered

by Tracy Ann Raef

Dr. Katie Woodard

Photo: Christopher Gannon

Survivability in the animal kingdom involves an animal's ability to respond and adapt to changing environments. That's true in veterinary diagnostics as well.

The Veterinary Diagnostic Laboratory at Iowa State reliably and accurately processes more than 80,000 case submissions and conducts 1.25 million diagnostic tests a year, yet can also turn on a dime to successfully respond to an animal disease emergency that affects an entire industry.

How it manages to successfully meet the challenges of an ever-evolving agriculture and public health environment isn't left to chance. At every level of the VDL, there's an entrepreneurial spirit that seeks out innovation, service and continuous improvement.

ONE SIZE DOESN'T FIT ALL

Many businesses have a homogenous clientele. Not the VDL. Its clients range from the animal agriculture industries themselves, each different; and the veterinary practices and livestock facilities within those industries – each with different needs.

The VDL is able to provide services tailored to what the client needs remarkably well.

"It's a big challenge," says Dr. Katie Woodard, who manages client outreach and education at the VDL. "It's important that we know our

clients, have an appreciation for the different operations they have, and learn to interact with them in a way that is beneficial to them."

During the avian influenza outbreak in 2015, the VDL had to work through several new issues to get the samples in quickly and tested. "We knew that there would be positive influenza samples at the lab. Our avian clients didn't want to touch the doors to the VDL." Woodard said. "So, we set up a biosecurity station in our driveway where they could get a packet with boots, gloves and antiseptic wipes and put those on in their car. Then they could get out of their car and go inside to deliver their samples. We had a system set up so they could discard them without contaminating their car."

STEPPING INTO THEIR SHOES

To learn what the client needs, Woodard begins by talking to them. "I will telephone them, and often make site visits to better understand their business or operation," she said. "Only after that am I able to set them up with a submissions system that makes the most sense for them."

Woodard is the translator between the client and the lab. "When I was hired, I spent time in each area of the lab to make sure I understood its role, and how it interacted with the rest of the lab. It's important to understand the lab as a system – a system made of many parts."

The VDL also hosts open houses for clients. "We talk about whatever the client wants to talk about at these events. They see what our lab processes look like during the day. We have started monetary incentives on testing if samples meet certain requirements, so we have less front-end time, so tests get completed faster. We're also happy to follow up at clinics to help train staff on how to submit samples."

ON THE HORIZON

Woodard has worked closely with the lab's team of IT professionals to develop and launch (effective March 12, 2018) a mobile-friendly version of its Client Web Portal. This provides VDL clientele an improved application for viewing case results and completing web-based submissions via their personal mobile devices. To ease another common logistical (and financial burden) for their clients, the VDL is close to rolling out a new program, ISU VDL EZ Ship, that will allow clients to easily get samples to the VDL. Clients will be able to generate and print UPS shipping labels directly from the VDL website and drop packages at any pickup site or arrange for UPS to pick up for delivery to the VDL.

With this client-focused mindset and continuous desire to improve and innovate, there's no doubt that Iowa's Veterinary Diagnostic Laboratory is built to last. **gd**



Building Skills and Confidence One Suture at a Time

By Tracy Ann Raef | Photos: Paul Gates

Mattie Hogg, third-year veterinary student, walks into the junior surgery suite and meets with the rest of her surgical team. The team will neuter a two-year-old, black Labrador retriever mix named Jake.

Hogg and her team are one of 10 teams that afternoon who will perform spay and neuter surgeries on shelter animals as part of a semester-long course. This required course is a new and expanded surgical training lab for third-year veterinary students. During the surgery lab, the students are responsible for all aspects of pre-surgical evaluation and physical exam, anesthesia, surgery, recovery and post-surgical care. They also provide wellness care. After the animals have recovered, they stay for

evaluation for a couple of days and then they are returned to the shelter for adoption.

Since inception of the new program in the fall of 2016, third-year students have spayed/neutered and cared for 1,085 dogs and cats. Currently there are 25 shelters and rescues in Iowa that participate in the program.

“The program is a win-win for the shelters and the college,” says Dr. Joyce Carnevale, assistant clinical professor of veterinary clinical sciences at Iowa State’s College of Veterinary Medicine.

“The spay/neuter and preventive care program is offered at no cost to the shelters which allows them to use

From left: Third-year students Alicen Tracey, Mattie Hogg, and Haley Holbrook prepare to neuter two-year-old Jake during the semester-long surgical training lab (Surgery, Anesthesia and Community Outreach Program).



A patient is wheeled from the prep area to the surgery suite by his student surgical team (from left) Breanna Leiseth, Kacie Bodholdt and Ryan Anderson.



Third-year students scrub-in before surgery.

their limited funding in other ways,” Carnevale said. “For veterinary students, the new, expanded program gives the third-year students hands-on, clinical and surgical experiences with live animals prior to the fourth-year clinical rotations. In addition to the surgeries, they perform diagnostic testing, examinations, and general wellness care.”

THE REAL DEAL

Unlike most of the veterinary classes during the first two years of veterinary school, this lab is hands-on training with live patients – and that can be challenging and stressful.

“There is more pressure on the students, more accountability,” says Dr. Tamara Swor, course coordinator. “These are live animals. Many are already adopted or will soon be.”

For Hogg, it’s a challenge that she welcomes. “As the surgical team, we are responsible for every aspect of the procedure,” she said. “We’ve met the patients before the surgery, and it’s easy to begin to care for them and want the best outcome.”

“Simulation models have a place in learning clinical and surgical skills but they only go so far,” Hogg says.

“Getting used to real skin and tissue is very different from the model and it’s one of the biggest challenges when we start working with live animals.”

An extraordinary teaching aspect of the partnership with the shelters is that the course gets animals ranging from puppies to seniors. “Our students get exposed to different health concerns with the different life stages,” Swor says. “The spay/neuter procedure is the same, but the students may be challenged with different complications. It’s hard to prepare them for that, but the variety of life stages of patients is exactly what happens in practice.”

Hogg took the course in the fall of 2017, when shelters in Ames were receiving animals that were displaced by the Texas hurricanes. “We were able to see cases and disease processes that we might not normally see in animal populations in central Iowa,” Hogg said.

For Christina Collins (’18), the course provided a good foundation of skills for her fourth-year rotations. “The outreach component of the course gave me practice performing a physical exam, and to become more comfortable using an otoscope and an ophthalmoscope,” Collins said.

“I also became more comfortable with vaccination requirements based on age and prior vaccine history. We also checked for parasite infections so I got microscope time and a chance to refresh my memory on antihelminthic treatments.”

TEAMWORK AND COMMUNICATION

At the beginning of the course, students are assigned in groups of three. In a class of 150, often the group may not know each other. The same group of three stays together for the course. Each week the group alternates between being the “intake” team for the surgery patients, and the “surgery” team for the patients.

When the group is the “intake” team, they are receiving patients that are going to surgery in two to three days. “It’s the job of the intake team to make sure all of the pre-operative blood work and preventive care is completed. The patient is transferred to the surgery team the night before surgery” Hogg said.

As lead surgeon, it was Hogg’s job to meet her patient Jake the night before surgery to assess any problems that the team might be dealing with the next day. The anesthesiologist on the team meets the patient the morning of

1,000th Patient

In February the Surgery, Anesthesia and Community Outreach Program treated its 1,000th patient since the program was revamped in the fall of 2016. Ford's surgical team (from left): Abigail Ruane, Megan Liegel and Jessica Usner
Photo: Tracy Ann Raef



surgery and works on the anesthesia plan. The assistant surgeon helps perform some of the procedure and helps close the incision. The team decides among themselves who will monitor and check up on the patient the next two days before the patient goes back to the shelter.

“Learning to work as a team was critical,” Hogg said, “and communication among our team was the key to being successful.”

Swor added, “Surgery is about teamwork. But, as veterinarians, they will still need those team-building skills outside the operating theater as they work with their receptionists, veterinary technicians and their colleagues.”

CONFIDENCE BUILDERS

The surgery lab is, no doubt, an exciting and terrifying experience. Helping students through the course are faculty, residents and veterinary technicians.

“The technicians are just as important as the surgeons in this program,” Hogg said. “They are invaluable to our education. They are patient with our learning process and often give us helpful tips while we work with the animals.”

Diane Perry, surgery technician, says, “The most satisfying aspect of my job is seeing the growth of the students through the semester, and helping any way that I can whether it’s answering questions, holding a patient, or teaching a new trick to make something easier.”

“Anesthesia is probably the most challenging and intimidating for students,” says Lisa Smith, anesthesia technician. “I try to be a calming influence when students are stressed and provide support to help them through the process.”

Like Perry, Smith enjoys working with students. “The greatest reward is seeing a student who has struggled at the beginning of the year become comfortable by the end of the course.”

“As the semester went along, our confidence improved,” Hogg said. “When students are stressed, we are our own worst critics.”

“There’s stress in the course,” says Swor, “but we try to make it a good learning environment.”

“During Jake’s surgery, Dr. Swor was patient and very encouraging,” Hogg said. “There are times during the course that you feel more comfortable with one of the faculty surgeons nearby, and other times you are more comfortable with a little bit of space. The surgeons are great about providing safe learning opportunities to fit students’ differing confidence and skill levels.”

FOREVER HOMES

“I was really proud to be part of this course,” Hogg said. “Besides the clinical and surgical skills we learned, we were able to give back to the community by taking care of these animals.” **gd**

A team of third-year students examines a patient that will go to surgery in a couple days.
Photo: Heather Brewer



TOPS in the Nation

By Dave Gieseke



The Lloyd Veterinary Medical Center sees more food animal patients than any veterinary teaching hospital in the country.

Photo: Christopher Gannon

Students wishing to get the very best experience in large animal veterinary medicine should look no further than Iowa State University's College of Veterinary Medicine.

"I truly believe Iowa State is the nation's leader in producing food animal veterinarians," said Dr. Pat Halbur, the Dr. Stephen G. Juelsgaard Interim Dean of Veterinary Medicine.

Halbur's contention is boosted by a number of facts including:

- Iowa State ranks first in the nation amongst veterinary teaching hospitals in food animal patient count according to the most recent numbers reported by the AAVMC.
- The College of Veterinary Medicine receives more USDA funding than any other veterinary college.
- The percentage of fourth year Iowa State veterinary students choosing either a food animal or mixed animal track is almost two-thirds of the total student enrollment and continues to climb.

The increase in overall food animal case load started in 2010 when the college's Veterinary Field Services Unit was re-established. At the same time, the Food Animal and Camelid Hospital within the Lloyd Veterinary Medical Center began offering additional services including more advanced diagnostics and treatment options for patients.

The highest percentage of animals seen at the Lloyd Veterinary Medical Center are beef cattle, although all species have made their way to the hospital

including sheep, show pigs, llamas, alpacas, goats, fawns and reindeer – virtually every animal imaginable.

"With the changing landscape of animal agriculture today, livestock owners may have emotional and social factors that are involved in their decision making," said Dr. Jennifer Schleining, the Scott and Nancy Armbrust Professor in Veterinary Medicine. "It's not strictly an economically driven issue for people to seek medical care for their farm animals anymore."

A majority of the caseload comes from Iowa farms but Schleining says the hospital frequently receives cases from Minnesota, South Dakota, Nebraska and other surrounding states. Phone calls and emails seeking medical advice come from veterinarians and clients from across the country.

"We're seeing a lot more referrals from veterinarians," she said. "They are more aware of our services and I believe that will continue to increase."

That's a huge benefit to Iowa State veterinary students. All fourth-year students are required to take a food animal medicine and surgery clinical rotation and the increased case load means more experiences and opportunities for them.

"The more exposure the students get to cases the better veterinarians they will become," Schleining said. "The procedures they perform while on their fourth-year rotations are the same type of procedures they will be doing after they graduate." **gd**

VARIED OR SPECIALIZED FOOD ANIMAL OPPORTUNITIES

- **Swine Medicine Education Center** in Audubon, Iowa. Students can take a variety of clinical rotations at SMEC where they gain valuable information about the swine industry, develop and practice clinical and production management skills, experience swine veterinary practice in modern production system and further develop communications skills.
- **Great Plains Veterinary Educational Center** in Clay Center, Neb. Iowa State veterinary students participate in week-long rotations at the GPVEC primarily in food animal health and production management of beef cattle. "Great Plains was a real bonus for me since I was trying to get as much experience as I could with a lot of repetition," said Tyler Baumann, a 2016 DVM graduate. "There are so many cattle out there that it's hard not to get a good, hands-on experience."
- **Iowa State Dairy in Ames.** This facility milks approximately 400 cows, but also raises their own replacement animals. Veterinary students can take an elective ambulatory rotation that offers them hands-on experience where they evaluate, diagnose and prescribe treatment on the working dairy farm. "This was a great experience for me because the ISU Dairy Farm could be any farmer's dairy operation that I will end up working with after I graduate," said Addie Felton, a 2016 graduate.
- **Swine, beef, dairy and small ruminant production** rotations that focus on solving real-world problems on the most progressive private farms in the region.
- **An embryo transfer rotation** using university or client animals where students become proficient in bovine embryo transfer and related advanced reproductive techniques.
- **Preceptorships in the private sector** organized and monitored by species focused faculty to assure students get desired hands-on experiences.

New Lab Enhances One-Year Master's Program

By Dave Gieseke

A new human anatomy lab has enhanced the one-year master's program in the College of Veterinary Medicine.

Photos: Christopher Gannon



Students utilizing cadavers is nothing new for the College of Veterinary Medicine. Historically, the education provided to veterinary medical students has included countless interactions with animal cadavers in the first-year anatomy class.

But human cadavers? That's something new not only in the college but also at Iowa State University.

"As far as we know, the use of human cadavers has never been done before at Iowa State," said Dr. Michael Lyons, senior lecturer in biomedical sciences. "But when we looked at the fact a majority of our students were interested in human medicine careers this is something we had to implement to continue the growth of the program."

Lyons is obviously not talking about the veterinary medicine program, but the One-Year Master's program offered in the college and the Department of Biomedical Sciences. That program is designed to meet the demands of a wide range of career pathways and make students more competitive candidates, regardless of their ultimate career interests.

This fall, the Department of Biomedical Sciences received the first year of donors – human cadavers which are

part of the University of Iowa Donor Program. The result is a significantly enhanced anatomy curriculum for the 50 master's students in the program.

The students studied six separate donors – three male and three female. The donors ranged in age from 67 to 98 and each had a variety of health issues.

"What is nice about utilizing donors in our curriculum is students see age-related pathology and they see first-hand what is more indicative of the aging process," Lyons said. "With the varied donors we have, the students are always seeing something different."

"Working with human donors will give our students a jumpstart on their human gross anatomy classes they will have to take later on."

There are numerous other advantages to working with human donors. Lyons says "nothing looks like it does in the book – that's the first thing students notice." The 3D models now available don't allow students to get an overall perspective of the human anatomy.

The Human Anatomy Lab is located adjacent to the DVM Anatomy Lab in the basement of the College of

Veterinary Medicine. Only students in the class are granted access to the facility and great care is maintained to respect the donors. After a year, the donors will be returned to the University of Iowa where they are cremated and the remains returned to family members.

In the meantime, the Department of Biomedical Sciences is looking for additional uses for the donors before the decommissioning ceremony. This spring, another 50 students are studying the donors, but this time the students are undergraduates from the main Iowa State campus.

The junior-senior level class will be offered in both the spring and summer, primarily to students in biology, pre-med and kinesiology.

"We think the summer class offering has the potential to attract students to the college from other institutions and provide a new pool of applicants for programs offered by the college," Lyons said. "And since we are the only institution in Iowa to offer such a close link between human and animal anatomy, we feel this will also be promoting teaching innovation in the college." **gd**



From left: Dr. Chad Johannes, Dr. Michael Nolan and Dr. Meg Musser talk in the oncology treatment area.
Photo: Christopher Gannon

TACKLING CANCER

By Tracy Ann Raef

Oncology Service to open radiation treatment facility this summer

When Dr. Chad Johannes came to Iowa State University College of Veterinary Medicine three years ago, he did so with a single purpose.

Along with Dr. Leslie Fox, he wanted to build a regional comprehensive pet cancer center. This summer they will realize the initial phase of that mission when the radiation oncology treatment facility opens at the Hixson-Lied Small Animal Hospital.

To reach this stage, the hospital's Oncology Service had to build a critical mass – quickly. Another board-certified oncologist, Dr. Meg Musser, was hired, and the service added an oncology resident with a second resident to join the team in July. The service's veterinary technician, Rachael Rail, rounds out the team, handling patient care, helping veterinary students and the oncologists, as well as client care.

With the addition of radiation therapy, the Iowa State Oncology team will partner with Dr. Michael Nolan, radiation oncologist at North Carolina

State University College of Veterinary Medicine. Nolan will help plan radiation treatments for patients at ISU.

“We're excited to be able to offer radiation therapy as a treatment option, in addition to surgery and chemotherapy,” said Johannes, veterinary internist and oncologist. “Iowa State will be one of the few veterinary colleges in the Midwest with stereotactic radiation therapy (SRT).”

SRT is a non-invasive, nonsurgical treatment that delivers high doses of precisely focused radiation to destroy a tumor with minimal damage to nearby tissue. “SRT typically involves one to four treatments, with manageable side effects; allowing good quality of life,” said Johannes.

SRT isn't an option for every cancer. “Usually SRT is an option for solid tumors, in areas that aren't candidates for surgery, such as inoperable brain tumors or nasal tumors,” Johannes adds.

Patients referred to the Oncology Service undergo a complete evaluation to determine the best treatment options. In some situations, there may be a couple treatment options; in others, there may only be one.

Sometimes, says Johannes, patients are eligible for clinical trials. “We typically have one or two ongoing trials. Long-term we want to enhance our trial capabilities.

“Our team is very client- and patient-focused,” Johannes continued. “We've developed client education sheets on the most common types of veterinary cancer, and try to help clients process a huge amount of information about a scary topic.”

The team's motto: Treat every pet as if it is your own. And, at Iowa State's Oncology Service, they do. “Our team is dedicated to helping patients live a longer, quality life. Clients see that there's a team approach to helping their pet. They aren't alone in this journey.” **gd**

A Giant of Higher Ed Frederick Douglass Patterson

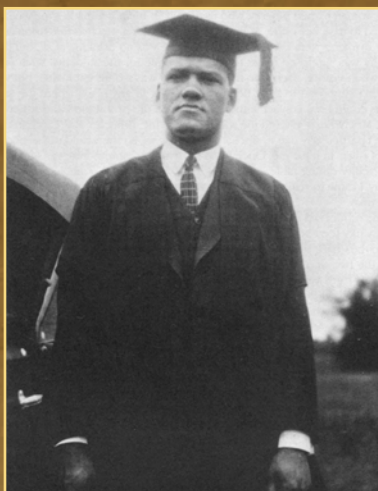
By Dave Gieseke



Founder of the United Negro College Fund. President of Tuskegee Institute for 20 years. Driving force behind the formation of the Tuskegee Airmen during World War II. Recipient of the Presidential Medal of Freedom.

Dr. Frederick Douglass Patterson's career had numerous trajectories. And that career's roots date back to veterinary medicine and Iowa State University's College of Veterinary Medicine.

"Dr. Patterson should definitely be considered a giant of higher education, right next to other



education pioneers of the day," said Brian Bridges, vice president of research and member engagement of the United Negro College Fund. "He is one of those unsung heroes of the 20th Century who should be celebrated because his contributions literally changed two fields for the better – the postsecondary education landscape and America's World War II efforts."

Patterson earned his DVM ('23) and master's degree in veterinary pathology ('27) from Iowa State. Born in Washington, D.C., Patterson attended Prairie View Normal School where he came in contact with Dr. Edward B. Evans, who also graduated from Iowa State and the College of Veterinary Medicine.

Evans became a mentor to Patterson and encouraged him to enroll at Iowa State to earn a veterinary degree. And even though Patterson was only African-American in the school during his tenure, he wrote years later that his experience in Ames was a positive one.

Frederick D. Patterson attending master's degree ceremony, Iowa State, 1927.

"In the veterinary program, I did not feel odd being a part of the group of students working in the veterinary clinic although I was the only black person there," Patterson wrote in his autobiography, *Chronicles of Faith*. "The absence of animosity encouraged me to see veterinary medicine as a field in which I could practice without being hampered by the racial stereotypes and obstacles that would confront me as a medical doctor, for example. I found the teachers of Iowa State helpful whenever I approached them. Educationally, it was a fine experience."

After graduating from Iowa State, Patterson became the director of agriculture at Virginia State College before moving to the Tuskegee Institute where his brilliant career moved forward.

He became Tuskegee's president at age 34 in 1935 and for the next 20 years transformed Tuskegee into a full-fledged university with graduate programs that continue to this day. In addition to spearheading Tuskegee's engineering and commercial aviation programs, Patterson founded the School of Veterinary Medicine in 1944.

Photos: Chronicals of Faith

That same year, he founded the United Negro College Fund, a philanthropic organization that funds scholarships for black students for 37 private, historically black colleges and universities. The organization has raised almost \$5 billion for scholarships since then.

"I do not believe the UNCF would exist today, or if it did, it would not have the same lengthy and impactful legacy – one that spans almost 75 years – that it does today without Dr. Patterson's leadership," Bridges said.

Patterson's legacy continues at Tuskegee, Iowa State and the United Negro College Fund where the Frederick Douglass Patterson Research Institute is the nation's foremost research institution looking at educational issues facing African-Americans from preschool to adulthood.

"Dr. Patterson's accomplishments and his dedication to providing educational opportunities to disenfranchised populations, particularly African Americans, make him a figure worthy of celebration in American history," Bridges said. **gd**



1945: First faculty of Tuskegee's School of Veterinary Medicine. President Frederick Douglass Patterson, front center.



Eleanor Roosevelt at Moton Field with Frederick Douglass Patterson (right) and student pilots.



1944: Organizing meeting of United Negro College Fund.



1946: Founder's Day Procession at Tuskegee University

AWARD AND SCHOLARSHIP TO BEAR PATTERSON'S NAME

In recognition of the legacy and achievements of Dr. Frederick Douglass Patterson (DVM '23), the College of Veterinary Medicine has created a faculty/staff award and new scholarships in his honor.

The Frederick Douglass Patterson Diversity and Inclusion Award will be awarded annually to the CVM faculty and/or staff who have advanced the college's mission of diversity, equity and inclusion.

The Frederick Douglass Patterson Scholarship was created to honor the personal merits and attributes of Patterson, who served as president of the Tuskegee Institute and is the founder of the United Negro College Fund. Scholarships will be awarded to be current and incoming DVM students.

Individuals wishing to contribute to the College of Veterinary Medicine Scholarship Fund should contact the CVM development team at vetmeddev@iastate.edu or 515-294-0867.



Help Along the Way

By Dave Gieseke

Photo: Christopher Gannon

It's difficult, if not downright impossible, to tell Alejandro Larios Mora's journey in a concise manner.

Each and every day of his 36 years is vital in narrating where Larios Mora has been and where he is going. His early, tough upbringing in Anaheim, California where he was a self-described "troublemaker" was fundamental to Larios Mora jumpstarting his education in community college.

The four years he spent as an undergraduate at Cal Poly Pomona led to his acceptance first as a veterinary student and then as a PhD/Pathology resident in Iowa State University's College of Veterinary Medicine.

You can't tell one story without it impacting on another.

And every step of the way, Larios Mora was assisted – first by family and then by people he came to know from all walks of life.

FAR FROM A DREAM

Alejandro Larios Mora is a dreamer. And he's a DREAMer. He's one of roughly 1.8 million immigrants in the United States who were brought to the United States as children.

In Larios Mora's case, he was born in Guadalajara, Mexico. When he was a child, his family moved to Hawaii where his father did construction work on a new telescope being built on the Big Island. About a year later the family moved to southern California.

"I wasn't a good student back then," Larios Mora remembers. "I didn't pass kindergarten – I mean, who doesn't pass kindergarten?"

He was a troublemaker. "I loved being a troublemaker." He was so bad in school that in the fifth grade the only way he could attend class was if his mother came to school with him.

"It was embarrassing to show up in school with your mom," he said. Even that didn't help.

"I got caught cheating in the fifth grade and my mom was in the class," Larios Mora said. "The teacher had enough by then."

It was a downward spiral from then on. Larios Mora says he didn't care if he graduated high school or not. And it looked like he wouldn't.

"It wasn't until two or three days before graduation that I found out that I was graduating."

Even though he was the first in his immediate family to receive his high school diploma, Larios Mora says he had no interest in education.

While he was in high school, he learned that he was undocumented.

Although his father had received his permanent residency, Larios Mora was still seeking his. When Larios Mora entered the ninth grade, his father petitioned for permanent residency on his behalf. Four years later U.S. Immigration Services still hadn't gotten to the application.

“All this time I thought I had been born in the U.S. That was tough. I was undocumented. I couldn’t get a driver’s license. I couldn’t work.”

– Alejandro Larios Mora

“All this time I thought I had been born in the U.S.,” he said. “That was tough. I was undocumented. I couldn’t get a driver’s license. I couldn’t work.”

STARTING FROM SCRATCH

Community college was Larios Mora’s only option. And even that wasn’t a great option.

There was the cost. At \$200 a credit hour, it was out of his price range. Then there was his educational background.

“I scored so low in my placement test that it was like I didn’t have any knowledge at all,” he said. “In my first math class I was literally adding numbers. I had to learn how to write sentences in English and had to take reading classes. I started from the bottom. It took me four years in community college to get to a high school level.

“I almost gave up. I was so far behind everyone else. I thought, ‘Why am I doing this?’ My family couldn’t relate and I was paying so much money for the classes.”

That’s when the village started developing for Alejandro Larios Mora.

At Fullerton Community College, he had a couple of mentors that assisted him, giving him the confidence he needed to succeed. One was Karyn Nguyen, a counselor at the school. As a refugee from Vietnam, Nguyen shared a common bond with the young DREAMer.

“Both of us believed that education is the key to success and that America is the land of opportunities,” she said. “And most important, Alex never lost hope.”

Nguyen served not only as a mentor but a role model, something Larios Mora hadn’t experienced before.

“I had no role models as a kid. I grew up in a really bad neighborhood and aspiring to be something more than everybody around you was difficult,” he said. “But after community college I had the confidence I could do this.”

STEPPING AROUND A ROADBLOCK

Larios Mora had given up on his dream of becoming a permanent resident. As he was preparing to graduate from community college, he was looking toward a four-year school.

But an obstacle continued to stand in his way. He was still going through the immigration process but he had gotten too old for the program he was attempting to sign up for. So, at age 21 his application went to the back of the line again.

With that came other difficulties. He still couldn’t legally work. He couldn’t drive. And more importantly for Larios Mora, he wasn’t eligible for federal or state financial aid.

Somehow, he wound up at California Polytechnic State University.

“That’s where I found out I was a good student – that I could go far beyond college,” he said.

It was also where he found a love for veterinary medicine and pathology in particular.

“I wanted to help both animals and people, and I loved science, but vet school was another four years.”

FINDING A HOME IN AMES

There were two reasons why Larios Mora decided to attend Iowa State University’s College of Veterinary Medicine. Knowing he wanted to be a veterinary pathologist, he researched the nation’s top programs and Iowa State came to the forefront.



Alejandro Larios Mora as a second year veterinary student.

Photo: Tracy Ann Raef

"I didn't even know Iowa State had a vet school," he said. "I applied. I was accepted."

More importantly, he got a scholarship.

"I came to Iowa State because of the scholarship and then my dad got a one-time loan that helped with some of my costs."

He was able to squeak by his first year financially. But then the college determined he couldn't receive the scholarship because of his immigration status. He had no money for tuition. No money for living expenses.

The Ames and Iowa State communities started stepping up.

"There are a lot of good faculty members here that were instrumental in my staying in school," Larios Mora said. "Jesse Goff (professor of biomedical sciences) not only let me stay at his house for a while, he let me eat his food. People like him were very helpful."

An anonymous individual paid for a semester of his tuition. He was part of the school's Summer Scholar Program. The Collegiate United Methodist Church in Ames supported him, allowing him to live in a church-owned house in exchange for doing chores for the church. It indeed took a village.

Bruce and Barbara Munson are part of the church's student ministry. They have known Larios Mora for seven years and became impressed with his personality and willingness to engage in conversation, talking about big questions.

"Over the years as we have heard more about his story, we continue to be amazed how he has overcome obstacles and hardships that would derail most of us," the Munsons wrote. "He is an example that having a mentor along the way at the right time is so, so important."

Goff also served as one of those mentors, providing Larios Mora with academic support as well as food from time to time. After a particularly bad

midterm exam result on a first-year nutrition class, Larios Mora went to Goff.

"He told me a bit about his past and how he had worked hard to get through undergraduate school," Goff recalled. "I gave him several books off my shelf and gave him some chapters to read. He would check in with me periodically to see what else he could read.

"He applied himself diligently to catch up to his peers and managed to pass my nutrition class."

Even with a village to help him, it was touch and go throughout his four years as a DVM student.

"I was accepted with open arms here," Larios Mora said. "With the help of so many people at least I was able to stay in school. But each semester I wondered how I could come up with the necessary funds."

In his third year, Larios Mora felt he had reached the end of the line. He was walking out of the vet school building heading to the bus stop and a one-way ticket back to California when he ran across then-Dean Lisa K. Nolan.

"Dr. Nolan asked how it was going and I told her I was going back home," he remembers. "She told me not to leave, that she would look into it, and somehow she made it happen, allowing me to continue.

"If I hadn't run into her that day I wouldn't be here now. Dr. Nolan and her efforts are a big part of why I am a veterinarian."



Alejandro Larios Mora and his "American parents" Bruce and Barbara Munson.
Photo: Tana Tesdall

TO BE GIVEN TO
THE PERSON NATURALIZED

“Whatever it takes to motivate people to change their lives, I think it starts with opportunities.”

– Alejandro Larios Mora

A PERMANENT RESIDENT

Larios Mora stayed and completed his DVM. Still an undocumented resident, he couldn't work. With the help of Nolan and Dr. Joseph Haynes, a PhD/pathology residency position was funded for Larios Mora to continue his education.

In 2012, the Deferred Action for Childhood Arrivals (DACA) program was created for individuals like Larios Mora who entered the country as minors. If the program would have been established a year later, Larios Mora wouldn't have been eligible.

Finally, in August 2017, Larios Mora received his permanent residency. He got a driver's license. He can work legally now and he is a postdoc with the Veterinary Diagnostic Laboratory. He is a board-certified pathologist, passing the board exam on his first try.

It's a happy ending to a difficult beginning.

“Alex is one of the most determined, hopeful and respectful young men I have ever met,” Karen Nguyen, his community college counselor says. “Even with all the odds against him, he remained hopeful and focused.”

“There was something about his ability to overcome adversity that would have

sunk most people, that I admired,” Jesse Goff said. “If this is not the American success story as a result of hard work and determination against the odds, I don't know what is.”

Former Dean Nolan says, “He is truly an inspiration to me and will be to others who meet him. He is a guy, who by virtue of what he has overcome and accomplished, can do much good in the world.”

And this from his “American parents,” Bruce and Barbara Munson, “He is truly a person who has prevailed against the odds. He has worked tirelessly against circumstances that would shut most people down.”

Larios Mora also realizes what he has accomplished.

“I had a difficult upbringing. There are so many obstacles for myself and others growing up in those neighborhoods – everything from the poor education you get to the lack of role models – there are a lot of things that prevent you from leaving the neighborhood.

“Now people in my old neighborhood look up to me. This sounds surreal to me but my nieces and nephews look up to me. A lot of the credit goes to all the people that have helped me along the way so I could complete this program.”

DREAMING FOR THE NEXT GENERATION

Alejandro Larios Mora is looking to give back. Last fall semester, he was walking down the College of Veterinary Medicine's hallway when he noticed a young, Latino high school student standing by herself after taking a tour of the college's facilities.

He didn't have to stop. He could have walked right by and no one would have blamed him.

Instead he stopped and engaged the young lady until her father finished talking with a college staff member. He spoke to her about her desire to be a veterinarian. He gave his phone number and asked her to call if she had any questions.

He was paying back what Nguyen, Goff, the Munsons, Haynes, Nolan and so many others in his life had done for him.

“Everyone needs a mentor, someone to help encourage them to succeed,” Larios Mora said. “Whatever it takes to motivate people to change their lives, I think it starts with opportunities.

“You can do something different with your life.” **gd**

VDL ECONOMIC IMPACT

A study conducted by Iowa State University's Department of Economics and **Dr. Derald Holtkamp**, associate professor of veterinary diagnostic and production animal medicine, indicates that the Veterinary Diagnostic Laboratory has a significant economic impact on the State of Iowa.

The study reports that the VDL is responsible for \$2,162.46 million in direct output, \$2,832.45 million in total output, \$1,158.19 million in total value added, and \$31.79 million in state taxes in normal years.

That equates to a nearly 8-to-1 return on investment in a normal year and a 31-to-1 return on investment in emerging years.

The study found that because the diagnostic lab's activities contribute to the ability of producers to identify and manage diseases as well as transport livestock, the lab's absence would lead to a 6.64 percent drop in the economic output of animal agriculture in Iowa during a normal year.

The drop jumps to 25.92 percent during an animal health emerging year.

View the full study online:
<https://www.sciencedirect.com/science/article/pii/S0167587717306190?via%3Dihub>



\$1 MILLION COOPERATIVE AGREEMENT

The Center for Food Security and Public Health (CFSPH) has been awarded a one-year, \$1 million cooperative agreement from the USDA Animal and Plant Inspection Service to provide support for highly pathogenic avian influenza (HPAI) preparedness and ongoing support for USDA emergency preparedness guidelines and support materials.

The project will support a variety of efforts to incorporate lessons learned from the previous HPAI outbreaks and continue to refine and enhance resources for producers, federal and state officials, and the public.

"This project benefits both the State of Iowa and Iowa State, since Iowa is the number one producer of eggs in the country and also produces a significant number of turkeys," said **Dr. James A. Roth**, Clarence Hartley Covault Distinguished Professor and CFSPH director. "Livestock and poultry are very important components of the Iowa economy. An effective response to HPAI is essential to Iowa agriculture and the Iowa economy in general. It is imperative that plans and procedures – based on lessons learned in the current outbreak – are in place prior to the next HPAI outbreak."



MIDWEST REGIONAL ANTIMICROBIAL RESISTANCE CONSORTIUM

The College of Veterinary Medicine is working with other Iowa State University faculty to create a new Midwest Regional Antimicrobial Resistance Consortium.

Iowa State has a group of diverse, highly experienced scientists who are already working on a broad range of topics related to antimicrobial resistance. The initiative involves 60 faculty members across campus with the purpose of engaging and involving state and regional stakeholders who share a common vision to move forward on developing a regional consortium.

"We want to expand our initiative into a larger regional consortium of researchers and stakeholders, which we propose to call the Midwest Antimicrobial Resistance Consortium," said **Dr. Paul Plummer**, associate professor of veterinary diagnostics and production animal medicine. "The initiative will take a systems-oriented approach so the biology and ecology of organisms are understood within the context of crop and livestock production and social, economic, environmental and other factors."

GRANT ESTABLISHES PARASITOLOGY RESIDENCY

Every practicing veterinarian deals with parasites on a daily basis. That's why **Dr. Matt Brewer** is excited about his latest USDA grant.

The \$250,000 grant will establish a parasitology residency in the College of Veterinary Medicine to support rural areas that are underserved in veterinary medicine.

This grant is in addition to a recent \$200,000 grant Brewer received from the National Center for Veterinary Parasitology on campus.

"Parasitology is especially relevant to the 'One Health' mission and relatively few veterinarians specialize in this area," Brewer said.

PARKINSON RESEARCH

The **Kanthasamy Research Group's** article, "Mitochondrial Impairment in Microglia Amplifies NLRP3 Inflammasome Proinflammatory Signaling in Cell Culture and Animal Models of Parkinson's Disease," was the cover story in the recent Nature Parkinson Disease on-line journal.



EQUINE STUDY ON RACE INJURIES

A new study by **Dr. Stephanie Caston**, associate professor of veterinary clinical studies, looks at injuries suffered in horses competing in eventing, a three-day equestrian event where a single horse and rider combination compete in dressage, cross-country and show jumping.

Caston's study focused on horses, primarily Thoroughbreds, competing at lower levels or beginning novice-training competitions.

"The most common reported injuries or causes of lameness were soft tissue injuries, joint pathologies, foot/hof pathologies, and muscle strain or damage," Caston wrote.

NEW WEBSITE IMPROVES QUALITY OF REPORTING ANIMAL RESEARCH

A new website (<https://meridian.cvm.iastate.edu>) coordinated by **Dr. Annette O'Connor**, professor of veterinary diagnostic and production animal medicine, aims to assist researchers not only to navigate the guidelines but improve the quality of reporting animal research.



Meridian (**Menagerie of Reporting Guidelines Involving Animals**) is a collection of reporting guidelines for research studies that involve animals. The website brings together in one location several publications that aim to help graduate students, post docs and faculty write better research reports.

"The goal of reporting guidelines is to improve the approach to reporting research studies so that the results can be used more fully," said O'Connor. "Incomplete reporting makes it difficult to assess the internal and external validity of studies, so reporting guidelines address both concepts."

The reporting guidelines in Meridian describe how to report randomized controlled trials, observational studies and experiments.

"We know that when working with animals, authors need to report unique information and through Meridian researchers can easily find the guideline that will help them write."

INFLUENZA-ASSOCIATED SWINE RESPIRATORY CASES

The number of influenza-associated swine respiratory cases are on the rise in a study produced by **Dr. Phillip Gauger**, associate professor of veterinary diagnostic and production animal medicine.

Gauger made his conclusion based on porcine respiratory samples submitted to the Veterinary Diagnostic Laboratory over the past seven years. Influenza A virus in swine (IAV-S) remains one of the top health challenges facing the U.S. swine industry. Gauger and colleagues recently launched an interactive web-base tool (ISU FLUture) to provide real-time diagnostic information on swine influenza.

AVIAN INFLUENZA RESEARCH

When the avian influenza virus hit the nation in 2015, there were a number of theories of possible sources of the virus. Now research by **Dr. Kyoung-Jin Yoon**, professor of veterinary diagnostic and production animal medicine, has eliminated one possibility.

Yoon's research found no evidence that small wild birds and rodents were possible sources of the avian influenza virus that decimated Iowa poultry flocks in 2015. The study captured about 450 animals at wetlands and near poultry facilities and were tested for the presence of the virus. The virus occurred in facilities practicing strict biosecurity controls, which opened the possibility of alternative infection sources like small songbirds and mammals.



CARMICHAEL TO RECEIVE UNIVERSITY'S TOP ALUMNI AWARD

Dr. Richard Carmichael ('55), retired veterinarian in Keota, Iowa, has been selected to receive Iowa State University Alumni Association's 2018 Distinguished Alumni Award.

Carmichael will be one of three individuals who will receive the University's highest alumni honor in ceremonies held in April on campus.

As president and general manager of Maplehurst Genetics International, Inc., Carmichael established the first embryo transfer company in the United States. He was the first person to "clone" cattle by producing two identical calves from a single embryo and holds U.S. and Japanese patents on equipment used to clone embryos.

He is the recipient of numerous awards including CVM's Stange Award in 2003. He served as president of the American Embryo Transfer Association and advised the Organization of International Epizootics in developing international health regulations for cattle embryos.

CVM ALUMNI BY REGION

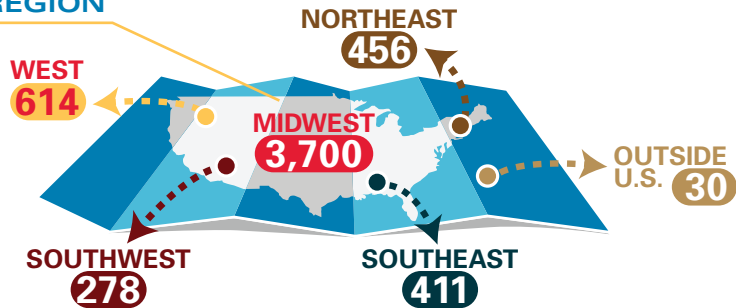


Photo: Christopher Gannon

TOP HONORS

The College of Veterinary Medicine recognized four individuals during Homecoming with its Stange and Switzer Awards. Pictured from the left, Dr. Jack Shere, Stange Award; Dr. Pat Halbur, the Dr. Stephen G. Juelsgaard Interim Dean of Veterinary Medicine; Dr. Richard Ross, Stange Award; Dr. Hank Harris, Stange Award; and Dr. Bill Williams, Switzer Award.



Photos: Dave Gieseke

ALUMNI RECEPTIONS

Alumni receptions were held at the Western Veterinary Conference in Las Vegas on March 5, VMX (NAVC) Conference in Orlando on February 6, and Nebraska Veterinary Medical Association Winter Meeting and Conference on January 26.



Photos: Dave Gieseke

HOMECOMING/ CLASS OF '67 REUNION

A series of alumni events was held during the 2017 Homecoming celebration. The Classes of 1967 (right photo) and 1977 held their 50th and 40th reunions while alumni of all ages came back for the annual Veterinary Medical Alumni Association luncheon. Several alumni and their families toured the College of Veterinary Medicine facilities (left photo) during their return to campus.



Life-long Advocate

By Dave Gieseke

Photo: Dave Gieseke

Dr. Bob Bashara has long had a passion for animal welfare. Throughout his career, he has worked with clients to educate them on the benefits of spay/neuter and well-pet care.

And although he was a fan of movie star Doris Day, he didn't realize they were kindred spirits in this arena.

Bashara ('63), remembers watching "Good Morning America" and seeing an interview with Day about the death of her close friend and fellow actor Rock Hudson.

"At the end of the interview they asked her about her animal foundation and she got big tears when she was talking about it," Bashara recalled. "I thought, 'here's someone who is really passionate about what she was doing.'"

Bashara shared his mutual passion for the spay and neutering of dogs and cats in a letter to the actress. He thanked her for her work with animals and the impact she had on animal welfare.

He didn't think much about the letter after that. And he for sure didn't expect a response – least of all the response he got. While on a trip to California, Bashara and his wife Jan stayed at Day's hotel in Carmel.

"When I returned home, there was a note on my office door marked 'personal' – Doris had replied to my letter and asked me to let her know the next time I was in California," Bashara said.

A lunch among the three cemented a fast friendship between the Omaha veterinarian and the Hollywood star and the start of a second career for Bashara. Today Bashara, retired from his Omaha practice, is the chief financial officer of the Doris Day Animal Foundation (DDAF). He also serves as Day's business manager for her entertainment ventures.

In his roles, he has raised additional funds to support hundreds of organizations across the nation who house, feed and provide veterinary care to thousands of rescued animals every year. He continues to oversee the grantee-selection process and all financial aspects of the DDAF.

Day also founded the Doris Day Animal League (a lobbying organization which advocates for animal welfare legislation) and under its auspices started Spay Day USA which has now become World Spay Day operating in 43 countries. Bashara works closely with the Humane Society of the United States in administering the program which has resulted in the spaying and neutering of more than 1.5 million animals since 1995.

"I work with the Foundation every day and have been a longtime supporter of the Humane Society and their efforts to rescue animals," Bashara said. "Just like Doris, I'm passionate about rescues."

One such rescue was Duffy, a Maltese the Basharas rescued in Omaha and

gave to Day. The dog had been left on the Nebraska Humane Society's doorsteps and was in poor, physical shape. The Basharas nursed it back to health.

"Duffy became a great pet for Doris," Bashara said. "She had just lost a small white dog and I knew she would love him."

The DDAF now has a Duffy Day Lifesaving Program, giving a second chance to disadvantaged animals that may otherwise be euthanized. The program has served as a fundraising model for shelters across the country.

"I do enjoy what I do," Bashara said. "I consider myself retired from veterinary medicine, but the Day Foundation has been like another career.

"It's been a lot of fun."

*Bob and Jan Bashara with Doris Day.
Photo Courtesy Bob Bashara*



Sharon Lives On

By Dave Gieseke | Photos courtesy Brian Darrow/Ron Tapper

Dr. Brian Darrow never knew Sharon. Neither did Dr. Ron Tapper. Yet the two College of Veterinary Medicine graduates have dedicated a good chunk of their lives to a foundation named in honor of Sharon with the hopes that what happened to her, won't happen to another eight-year-old girl. Or anyone else for that matter.

Darrow (DVM '83) and Tapper (DVM '84) are the co-founders of the Sharon Live on Foundation, a rabies vaccination program focusing on dogs, cats and donkeys in the Nandi Central

District of Kenya. The program was a response to Sharon's death due to a bite from a rabid dog just one day before Christmas in 2003.

As previously mentioned, neither Darrow or Tapper knew Sharon. They didn't know her parents yet there is a strong Iowa State connection. Sharon was the daughter of Barnaba Korir, a former Cyclone track athlete. Turns out both Darrow and Tapper ran track for legendary Iowa State coach Bill Bergan. Bergan shared Sharon's story at an Iowa State track reunion years after her death.

Darrow was in attendance at the reunion and was moved by the story. "An 8-year-old girl shouldn't die from rabies, no matter where she lives," he said.

The Anamosa, Iowa, veterinarian was aware of a program offered by Merck Animal Health where if one dose of the Merck rabies vaccine was purchased, another would be sent to Africa.

The Sharon Live on Foundation was born that day.

Kenyans bring their dogs to be vaccinated for rabies during one of Drs. Brian Darrow and Ron Tapper's first visits to the nation.





Drs. Ron Tapper (far left) and Brian Darrow (middle) have met with Kenyan officials during their trips as part of the Sharon Live on Foundation.

Darrow immediately sought out help, thinking first of his former high school friend, fellow Cyclone track athlete and College of Veterinary Medicine graduate. Tapper now resides in Hollywood, Florida, and has remained in close contact with his friend.

“We regularly talk about veterinary issues or where our next adventure will take us,” Tapper said. “When Brian first expressed an interest in trying to do something with rabies control in Kenya, I was in – no hesitation – no reservation.

“My only question was ‘what do you need me to do?’”

“How many people have friends that you can call and they immediately agree to go to Kenya with you and start vaccinating dogs,” Darrow asks?

The two worked with Merck, which donated tens of thousands of dosages of the rabies vaccine and helped the logistics of getting the two to Kenya. Research shows if a community can vaccinate 75% of the domestic animals, it will reduce

the human exposure to rabies by 90%. That’s significant because there are annually 2,000 deaths from rabies in Kenya and 95% of deaths caused by rabies are due to dog bites. Worldwide, it is estimated between 50,000 and 70,000 people die each year from rabies.

“Merck has been fantastic with their support,” Tapper said. “If it was not for them, our project would have struggled.”

Even then, the experience was surreal to Darrow and Tapper. They describe seeing a Kenya few outsiders ever get to see. They lived amongst the locals and experienced day-to-day life in the Kenyan countryside.

“We really were not sure what to expect,” Tapper said. “It turned out fantastic.”

The Iowa contingent was greeted to a grand opening ceremony at the village where the project was to be conducted. Everyone in the village and surrounding community attended with speakers, singers and the children.

“We sat for five hours at this celebration,” Darrow said. “It was surreal to have a parade waiting for us.”

On vaccine days, they would travel down barely passible roads to rudimentary cattle corrals that seemingly appeared out of nowhere.

“Slowly small groups of people would come walking from all different directions with dogs on leashes and cats in bags,” Tapper said. “We even did a few donkeys along the way.”

The immediate impact that Darrow and Tapper made through the Sharon Live on Foundation was significant. On their first trip, the duo and their team vaccinated around 18,000 animals. That first trip was a total leap of blind faith.

By the time they returned to Kenya for a second trip, the local government had embraced the foundation’s mission and had expanded the program to the entire county with more than 90,000 animals vaccinated.

“It’s pretty amazing to think that two veterinarians with their roots in Anamosa and Iowa State University would travel to Kenya and help improve the lives of the African people.”

— Ron Tapper, DVM



Drs. Brian Darrow and Ron Tapper in Kenya.

The day-to-day operations were now being supervised locally, allowing Darrow and Tapper to meet with national government officials to discuss plans to duplicate the program throughout Kenya. To date, more than 400,000 doses have been donated to the Sharon Live on Foundation and have been used to improve the health and lives of Kenyans throughout the country.

Darrow has put his heart and soul into the Sharon Live on Foundation, traveling to Kenya four separate times.

“I am proud of Brian for what he had the vision to start,” Tapper said. “I am proud of myself for having blind faith in my friend to say ‘I’m in’ before I really had any idea of what we were going to do.

“It’s pretty amazing to think that two veterinarians with their roots in Anamosa and Iowa State University would travel to Kenya and help improve the lives of the African people.”

Dr. MacKenzie Paulson is a 2011 Iowa State DVM graduate and works with Darrow at the Anamosa Veterinary Clinic. She has first-hand knowledge of how dedicated Darrow is to the Sharon Live on Foundation.

“Dr. Darrow has put a lot of his personal time, energy and emotion into his Kenyan Projects,” she said. “Every time I’ve seen him speak about Sharon, the wavering in his voice and the tears in his eyes tell you how much he cares about the people of Kenya.

“He would be in the middle of surgery and his phone would ring and a big smile would light up his face as he proudly stated, ‘Kenya is calling!’ It was through his dedication that he was able to get the Kenyans to think big and to employ tactics to make Sharon’s Project self-sustainable.”

Darrow on the other hand gives all the credit to others.

“What I have received back is much greater than anything I’ve given,” he said. “This has all happened not because of me, but in spite of me.

“If at least one life has been saved because of our project, then we’ve made a difference.” **gd**



*Top: Dr. Brian Darrow treats a dog in Kenya.
Bottom: Dogs await their turn to be vaccinated.*

#GentleDoctorsEverywhere

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View full stories at vetmed.iastate.edu/gentle-doctor-severywhere



Craig Harms

#GentleDoctorsEverywhere '89

Shell of a Time

Photo: N.C. State/CMAST

Working with sea turtles is a way of life for Dr. Craig Harms ('89). He treats sea turtles at the North Carolina Aquarium. At a sea turtle hospital in Surf City, N.C., he teaches medical treatment for the reptiles to fourth-year veterinary students from North Carolina State University. And now he is a co-author of *Sea Turtle Health and Rehabilitation*, a publication many feel is destined to become the bible of how to diagnose and treat sea turtles. Learn more about Craig Harms' dedication to sea turtles.

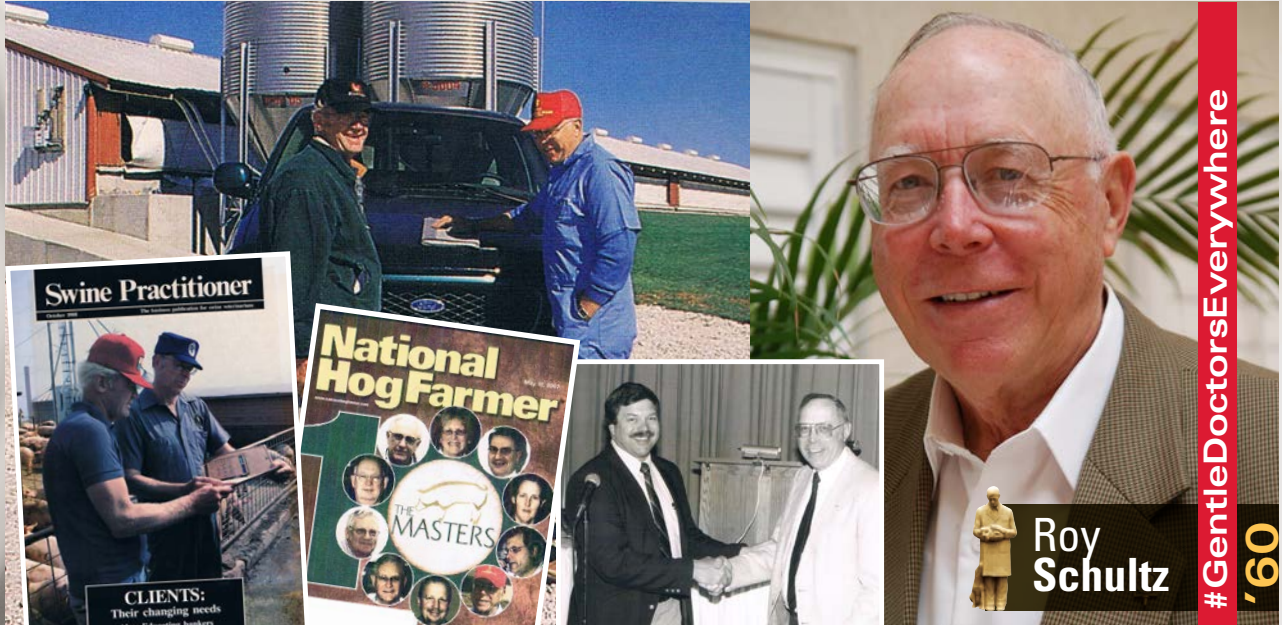


Lonna (Halvorson) Nielsen

#GentleDoctorsEverywhere '88

Tales of the Gentle Doctor

Dr. Lonna (Halvorson) Nielsen ('88) writes about her connection to the Gentle Doctor statue and the story of the veterinary student who posed for the iconic Christensen Petersen sculpture.



Veterinarian, Mentor, Educator

Photos Courtesy of Roy Schultz

Legendary swine veterinarian Dr. Roy Schultz ('60) is an internationally renowned veterinarian. Recently Schultz established the Roy A. Schultz Professorship in Swine Medicine in the College of Veterinary Medicine.



Great Performances

Social media gave Dr. Adam Christman (2004) the opportunity to merge his two passions into one creative outlet. Now Christman, co-chief of staff of the Brick Town Veterinary Hospital in Brick, New Jersey, is a fixture on YouTube, Facebook and Instagram with the "The Dr. Christman Show" and an internet TV variety show, "The Adam Christman Show!" "I've always said, being a veterinarian is truly a performance – you have to deliver a great performance to your clients and fellow team members consistently," he says.



#GentleDoctorsEverywhere '71

Kelley Donham

Helping Nancy

On a remote trek to see the solar eclipse from a mountain, a friend suffered a stroke – spurring Dr. Kelley Donham ('71) and fellow travelers to action as they worked, against the odds and terrain, to get Nancy to safety. Read Donham's tale as he participates in the Des Moines Register's Storytellers Project.



#GentleDoctorsEverywhere '14, '16

Ben & Erica Schmidt

An Adventure Down Under

After a lifetime in the United States, Drs. Ben ('14) and Erica ('16) Schmidt find themselves a world away from Iowa and the life they grew up in. After graduating from Iowa State, the Schmidts wanted something more. They found an adventure in Australia. "We were looking for something that would challenge and give us a new perspective and experience in veterinary medicine," Ben said. The couple now resides in Australia where Ben works with dairy cattle at Warrnambool Veterinary Clinic and Erica splits her time between that clinic doing mixed animal work and Southwest Equine, a clinic that focuses all its efforts on horses.

#GentleDoctorsEverywhere



FOREVER TRUE, FOR IOWA STATE

Total Fundraising Production

March 28, 2018

\$10,644,209

TARGET \$10,000,000
(FY18)

106%

\$58,041,313

TARGET \$70,000,000
(FOREVER TRUE CAMPAIGN)

83%

A Gift of Love

Two sisters who are passionate about their German Shepherd dogs have given back to their beloved animals. In their lifetime, they have shown dogs in obedience as well as in confirmation at dog shows. They have loved these seven dogs and given them a life of compassion and care. In return, they have received unconditional love and much joy.

Throughout the lifetime of their dogs, the sisters brought them to the Hixson-Lied Small Animal Hospital for care. "The faculty and staff at the hospital were especially helpful and knowledgeable. They were respectful of us and our dogs, and it's obvious they are committed to their profession."

They appreciated the continuous care of one of their dogs, Dasani, received when treated by the faculty and staff in the dermatology service and canine rehabilitation facility. This care helped to enhance her quality of life. As a result, they have chosen to create an endowment for the Small Animal Dermatology program, with some funds also supporting the canine rehabilitation.

The endowment, German Shepherd Dog Memorial Fund for Support of Small Animal Dermatology, was created with cash giving and was also backed with their estate plans. Endowments are designed to last into perpetuity, with annual distributions used to provide support for the area(s) identified in the funds terms.



Dasani in canine rehabilitation pool.

Since both sisters have doctorate degrees and believe in advanced training and education, the endowment funds will be used to provide support for resident training in small animal dermatology.

"It came to us that every time we lose a dog they take a piece of our hearts with them, and every new dog who comes into our lives gifts us with a piece of their heart. If we live long enough all the components of our hearts will be dog, and we will become as generous, and loving as they are."* Hopefully this loving gift of a perpetual endowment will provide many animals specialized care through the additional training and education of a licensed veterinarian to become a board-certified dermatologist.

Equine Program Receives \$400K Gift

The Fullgraf Foundation has committed \$403,000 to the College of Veterinary Medicine to purchase equipment and support veterinarians in residency in the Lloyd Veterinary Medical Center.

A \$250,000 grant establishes the Charlotte Stone Fullgraf Equine Surgery Resident's Research and Support Fund. A second grant of \$153,000 will allow the College of Veterinary Medicine to purchase much-needed equipment for the equine surgery section.

"If we live long enough all the components of our hearts will be dog, and we will become as generous, and loving as they are."

— Modified quote, Unknown Author

"We are deeply appreciative of the support of the college's development director **Trent Wellman** who helped us through this process," said the sisters.

"In this case the best gifting avenue was to create their own endowment, however, anyone can support an existing endowment, or give funds for a specific purpose," said Wellman.

Upon learning about their intentions, Dr. Jim Noxon, **Dr. Darren Berger**, and **Joanna Hildreth** were extremely grateful and humbled that their everyday work would substantiate such generosity.

For more information about gifting opportunities:
Contact the CVM Development Office at: 515-294-0867

* Modified quote, Unknown Author

The Charlotte Stone Fullgraf Equine Surgery Resident's Research and Support Fund will provide annual funding for two equine surgery residents to help cover research project expenses and continuing education costs.

"Currently, our residents must either apply for research grants in hopes for funding for their project, pay for their own project or be a part of a project that is funded by one of our senior clinicians," said **Dr. Kevin Kersh**, clinical associate professor. Research projects are a requirement of the equine surgery program. "This new fund will also significantly defray costs borne by our surgical residents for attending continuing education and advanced training meetings."

The second grant will allow the equine program to purchase several pieces of critically needed equipment for the surgery section. These include a fluoroscopy unit (C-arm), an imaging modality that uses X-rays to produce a real-time image of anatomy.

"The ability to offer imaging in real time becomes critical in equine surgery," said **Dr. Stephanie Caston**, associate professor of veterinary clinical sciences. "The fluoroscopy unit will be used in surgery to ensure that the surgical procedure is proceeding correctly, for instance, when we are repairing fractures we can ensure that implants are placed where desired and the fracture is aligned correctly."

Other equipment purchases will include a locking compression plate, a videoendoscopy unit and an arthroscopy fluid pump.

GIVING





TOPS

IN THE NATION

Photo: Christopher Gannon

Students wishing to get the very best experience in large animal veterinary medicine should look no further than Iowa State University's College of Veterinary Medicine.

"I truly believe Iowa State is the nation's leader in producing food animal veterinarians," said Dr. Pat Halbur, the Dr. Stephen G. Juelsgaard Interim Dean of Veterinary Medicine.

"Iowa has a diverse \$32.5 billion animal agriculture industry. The College of Veterinary Medicine has created a teaching program that builds a strong base of knowledge in our classrooms and labs with an emphasis on hands-on experiences which prepare our students to be practice ready on day one."

READ FULL STORY ON PAGE 11