

# VISIONS

A blue medical coat is the central focus, with a silver stethoscope draped over it. The background is a solid blue color. The word "VISIONS" is written in large, white, sans-serif capital letters across the top of the image.

HOW IOWA STATE'S COLLEGE  
OF VETERINARY MEDICINE  
GOT ITS GROOVE BACK





# HOW IOWA STATE'S COLLEGE OF VETERINARY MEDICINE GOT ITS GROOVE BACK

With a dazzling array of specialists and an influx of funds for world-class facilities, ISU is a leader in protecting animal and human health

BY VERONICA FOWLER • PHOTOS BY JIM HEEMSTRA

**T**he life of Denise Brucher's beloved 3-year-old German shepherd, Sam, hung in the balance.

For weeks, Sam had been flinching if anyone touched her neck. Her local vet guessed the active dog had a pinched nerve and prescribed medication. But one morning last fall, the high-energy Sam didn't want to get out of bed. Shortly after, she started drooling and shaking.

Brucher tried to get into her usual vet near her home, located about 20 minutes from Cedar Rapids, but she couldn't reach the vet that early in the day. So Brucher scooped up her dog and rushed her to a local emergency vet, who found that the dog's pupils were dilating unevenly – a sure sign of a neurological disorder.

The vet informed Brucher that Sam needed an MRI to diagnose what was quickly becoming a life-threatening condition. The only MRI machine for animals in Iowa was at ISU's Dr. W. Eugene and Linda Lloyd Veterinary Medical Center, 90 minutes away. The second closest was in Madison, Wis. – six hours away.

Brucher rushed the dog to Ames, where the staff was waiting for her, alerted by the emergency vet when Brucher left.

"They were so wonderful," says Brucher. "I almost start crying just talking about it. Sam is like one of our children."

Brucher found that she had not only a veterinary neurological specialist on Sam's case, but a whole *team* of neurolo-

gists. The MRI showed what was suspected to be a blood clot in Sam's brain, and immediate surgery was needed.

Surgery revealed that it was actually an abscess in the dog's brain, a rare condition, and the abscess was removed. If Brucher had tried to get to Madison, the dog likely would have died because of the delay. "I'm just so grateful. Everything lined up perfectly," she says. "They literally saved her life."

#### Like a Mayo Clinic for animals

Remarkable stories like Brucher's happen almost every day at the Lloyd Veterinary Medical Center, and promise to happen even more. The veterinary medical center is undergoing a true renaissance with a recent influx of funding, staff, and

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Denise and Dave Brucher of Watkins, Iowa, returned with their dog, Sam, to the Lloyd Veterinary Medical Center for a follow-up exam. Dave is a computer technician with the Iowa National Guard at Camp Dodge in Johnston; Denise is an insurance sales representative.







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**D**r. Michael Curtis, clinician and section head of the Intensive Care Unit, treats Blue, a dog that has been brought into the ICU with difficulty breathing. Assisting Dr. Curtis are fourth-year students in the ICU rotation: Jessica Baron, Sherry Johnson, and Emily Beard. The staff of the small animal ICU operates a 24/7 emergency room and treats other patients that require continuous care.  
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## FACILITIES HIGHLIGHTS

The newly expanded Small Animal Hospital opened its doors for service on July 19, 2011, following a building project that more than doubled the size of the old small animal hospital at a cost of \$45 million. The facility was fully completed in May 2012, with a dedication scheduled for Sept. 13. New spaces focus on client comfort and patient care:

- New entry with artwork and species-specific waiting areas
- 22 exam rooms, more than double the previous number
- Five dedicated treatment rooms for veterinary specialty sections
- State-of-the-art intensive care and emergency medicine unit
- Patient-focused wards with increased cage space and easily accessible outdoor K9 turf grass
- 10 teaching rounds rooms to facilitate student learning
- Five surgical and prep suites
- Secure hallways for improved biosecurity and general hospital security

### In addition to the Small Animal Hospital:

- Completed in 2008, the large animal facilities expansion added more than 108,000 square feet at a cost of \$48 million
- A new 10,000-square-foot Field Services Building provides office space, work and storage areas, a field laboratory, student rounds room, garage space for three equine and six farm animal ambulatory trucks, an area for instrument preparation, and teaching space for reproduction labs
- An Advanced Imaging area, located between the large and small animal hospitals, houses specialized services including CT, MRI, nuclear medicine, digital radiology, and more
- A 2,500-square-foot pharmacy area includes sterile compounding room and more work space to enhance efficiency and service
- Total overall facilities enhancements represent an investment of more than \$120 million in veterinary medical education and services

spanking new state-of-the-art facilities.

“We’re like a Mayo Clinic [for animals],” says ISU College of Veterinary Medicine Dean Lisa Nolan. “We provide that high level of expertise and facilities that you cannot find just anywhere” in the region.

ISU’s veterinary medicine complex is made up of a wide array of entities. It encompasses five academic departments of the university. It also includes the Lloyd Veterinary Medical Center, which includes the small and large animal hospitals. The Veterinary Medical Center also includes mobile veterinary services for farm animals and horses and the state’s only accredited Veterinary Diagnostic Laboratory, as well as numerous centers and institutes.

ISU is able to provide for the animals it treats with entire teams of specialists in an astounding array of specialties: cardiology, anesthesiology, dermatology, internal medicine, oncology, neurology, radiology, canine rehabilitation, pathology, dentistry, reproduction, toxicology, and neurotoxicology. In all, the college has 72 board-certified specialists.

There are even veterinary eye specialists, but don’t expect any eye charts on the wall for animals to try to decipher. Instead, the veterinary ophthalmologist is likely to do physical analysis of the eye, including looking inside the eye with special equipment, gauging eye pressure, checking eye mobility by following objects, and dilating pupils.

The MRI, as Brucher’s case illustrates, is impressive. (Even some human hospitals don’t have these useful but prohibitively expensive machines, which can take images of the inside of a body.) And now, with the recent expansion at the ISU veterinary medical center, the center has also added a CT machine with increased quality and capability.

### Animals’ role in human health

Besides its renown in animal health, the ISU College of Veterinary Medicine is also playing a critical role in human health as researchers seek to better understand the connection between healthy

animals and healthy humans – in Iowa, the U.S., and the world.

From circovirus infection in hogs to HIV in humans, from Parkinson’s disease to strokes and *E. coli* outbreaks, ISU veterinary researchers work not just to keep animals healthy, but also work to prevent diseases that can affect the food chain or can be passed to humans. (Studies indicate that as many as 75 percent of newly identified emerging human diseases originate in animals.)

Also playing a global role in animal health is the ISU Veterinary Diagnostic Laboratory. It analyzes and identifies diseases from hundreds of thousands of samples all over the world. It is one of the original 12 laboratories in the U.S. chosen to monitor animal disease to help identify and track diseases and outbreaks globally.

Just hanging out in the waiting room of the brand new, well-appointed reception room at the center shows that there’s a lot of fascinating stuff going on.

You might encounter several cats and dogs from around the Midwest, brought in for life-saving chemotherapy. Or you might see German shepherds from the Des Moines or other police canine units, each accompanied by a uniformed officer.

Not that you should expect to see only cats and dogs in the small animal waiting room these days. With the addition of new exotic animal specialists, more than ever, you’ll see everything from iguanas to ferrets to pot-bellied pigs at the hospitals.

Of course, in the large animal hospital you’ll find plenty of the swine, cattle, horses, and other livestock that are the foundation of Iowa’s land-grant mission. In fact, the renovations have enhanced ISU’s work in that area.

After the recent rebuilding of the large animal hospital, the college was able to reinstate its Veterinary Field Services, mobile veterinary trucks staffed with clinicians that travel to the animals. That reinstatement was so successful it resulted in more animals coming to the large animal hospital, which had to be

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After finding *Salmonella* enteritidis in an egg-production facility, Iowa State’s egg processing laboratory now receives 1,000 eggs at a time from Midwest egg producers to check for the organism. The eggs are washed, dipped in iodine (which gives them their yellow tint), bagged, and tested. Dr. Tim Frana, the College of Veterinary Medicine’s bacteriology section leader, said that more than 375,000 eggs have been tested in the last 18 months.

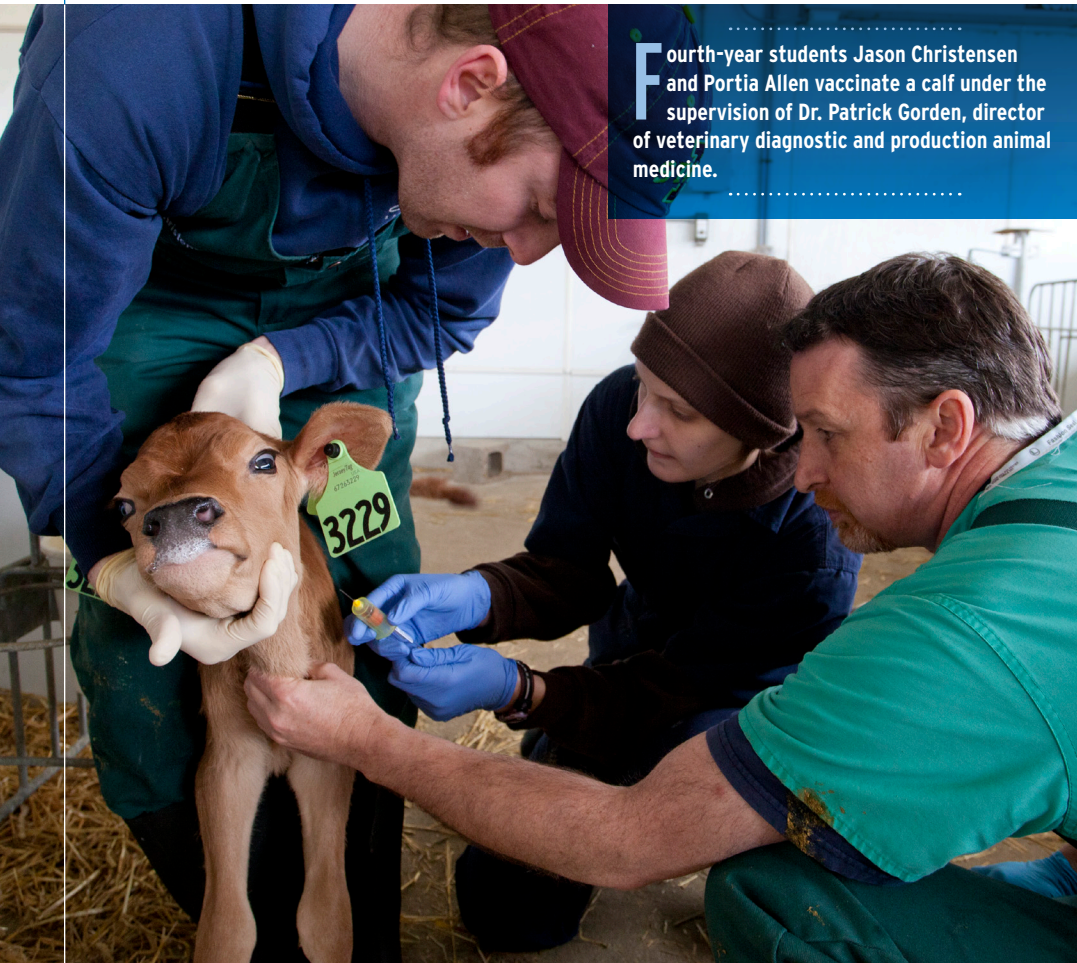


## THE ISU VETERINARY DIAGNOSTIC LABORATORY

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Fourth-year students Jason Christensen and Portia Allen vaccinate a calf under the supervision of Dr. Patrick Gorden, director of veterinary diagnostic and production animal medicine.



Nivedita Ravichandran, a fourth-year student from India, pauses from her review of a slide in the dermatology lab to listen to her professor, Dr. Jim Noxon.



Dr. Diana Miller, a dermatology clinician, reviews the symptoms of a canine patient, Sophie, who was brought in to the small animal hospital with skin lesions. Fourth-year students are, from left to right: Brett Kroeze, Brett Swan, Cory Bagnell, Sara Jacobsen, and Amanda Tichy. Dr. LaTisha Taylor (far right) is an intern at the hospital and an adjunct instructor.

# TRAINING TOMORROW'S

# VETERINARY SPECIALISTS



Sara Jacobsen, a fourth-year veterinary student from Connecticut, participates in a small-group discussion.

Last year, 149 students were admitted to Iowa State's veterinary medicine program from a total of 1,124 applicants. The 2011 incoming class - which is 74 percent women - brings the total veterinary student population to 586, plus 103 graduate students. Vet med students represent a total of 38 states and four countries.

Students spend their first three years in the classroom; fourth-year students receive hands-on instruction and practice in the veterinary medical center. Fourth-year rotations include surgery, intensive care, dermatology, radiology, small animal medicine, anesthesiology, and other specializations. Students choose a small animal option, equine option, mixed animal option, or food animal option for their doctor of veterinary medicine degree.



Dr. Karl Kraus, professor of small animal surgery, lectures to second-year veterinary students on animal neurosurgery techniques.



further expanded.

The work of the ISU program is further supported with the proximity of the famous U.S. Department of Agriculture National Animal Disease Center. Although the center is not formally connected with ISU, “it’s a rare day that we do not interact with the NADC,” says Dr. Pat Halbur, executive director of ISU’s Veterinary Diagnostic Laboratory and chair of the Veterinary Diagnostic and Production Animal Medicine Department.

In fact, the ISU College of Veterinary Medicine forms a cornerstone of one of the world’s largest concentrations of animal health professionals. Besides the NADC, Ames also houses the National Veterinary Services Laboratories and the Center for Veterinary Biologics, also USDA facilities.

Last year the One Health Commission announced it was moving to the ISU Research Park. The commission works to promote improved health of people, animals, plants, and the environment. The result of this convergence of facilities is that Ames has become to animal health what Atlanta and the National Centers for Disease Control and Prevention are to human health.

#### Wake-up call

ISU’s stellar reputation took a hit a few years ago. Back in 2004, the American Veterinary Medical Association (AVMA) gave the College of Veterinary Medicine – the oldest public veterinary school in the country – only limited accreditation.

Although the AVMA commended the college for its strengths in curriculum as well as key areas of public health, food safety, infectious disease, neurosciences, surgery, veterinary diagnostics, and production animal medicine, the report cited a need for more suitable isolation units, improved safety in surgical anesthesia, neonatal units for horses and cattle, improved safety in loading and unloading facilities for horses, and improved environmental conditions in the food animal and equine hospital.

The partial accreditation was a wake-up call for both the university and the state, as well as for federal funding sources.

All responded to the problem with



Equine surgeon Dr. Stephanie Caston performs a digital x-ray on the foot of 2-year-old Kenzie. Fourth-year veterinary students participating in the equine rotation are Erin Conrad, Brett Kroeze, Jamie Petersen, and Lindsey Rothe. The equine facilities in the Lloyd Veterinary Medical Center’s large animal hospital offer clients three surgery suites, closed-circuit surgery cameras, an intensive care unit, and an isolation facility. The expanded spaces have decreased the risk of cross-contamination and enhanced client/patient confidentiality.





**A**rtist Sarah Grant ('09 honorary) and her Sticks, Inc. art studio of Des Moines were commissioned to create artwork for the Hixson-Lied Small Animal Hospital. The whimsical artwork includes two totem sculptures and nine wall panels that focus on the animals primarily cared for in the small animal hospital: dogs, cats, birds, reptiles, and exotic animals. Other artwork in the Lloyd Veterinary Medical Center includes bronze sculptures of frolicking dogs and a cat by Gwynn Murrill and sand-blasted glass murals by Michaela Mahady. And the original 1937 *Gentle Doctor* sculpture by Christian Petersen has a comfortable new home: the interior entrance of the small animal hospital.

significant upticks in funding for the college. The Iowa Legislature approved bonding authority to help fund an ambitious, two-phase renovation of the veterinary medical center and the completion of a biosecurity unit.

By the middle of this year, “the state of Iowa, our donors, and ISU will have invested more than \$120 million since 2006 in our expansion and renovation,” says Nolan. About \$14 million has been secured in private donations. As a result, the college’s rank in research funding has increased from 22nd to 9th over the past five years.

The result of this infusion of funds is readily apparent to visitors. After many months of construction, work on the facilities was completed in May, and a dedication ceremony is scheduled for Sept. 13.

A tour of the new facility is down-

right dazzling, starting with the bright, cheerful, well-appointed reception room, which includes a play area for children. The famous Christian Peterson *Gentle Doctor* sculpture graces the entry. Massive artwork by Sticks of Des Moines spans a wall. Clients can choose from one of the segregated waiting areas (including areas for cats, dogs, and exotics). Now Dean Nolan can talk with unvarnished pride about the facilities and rattle off recent accomplishments and international faculty, saying, “The outcome is full accreditation and a world-class, state-of-the-art facility.”

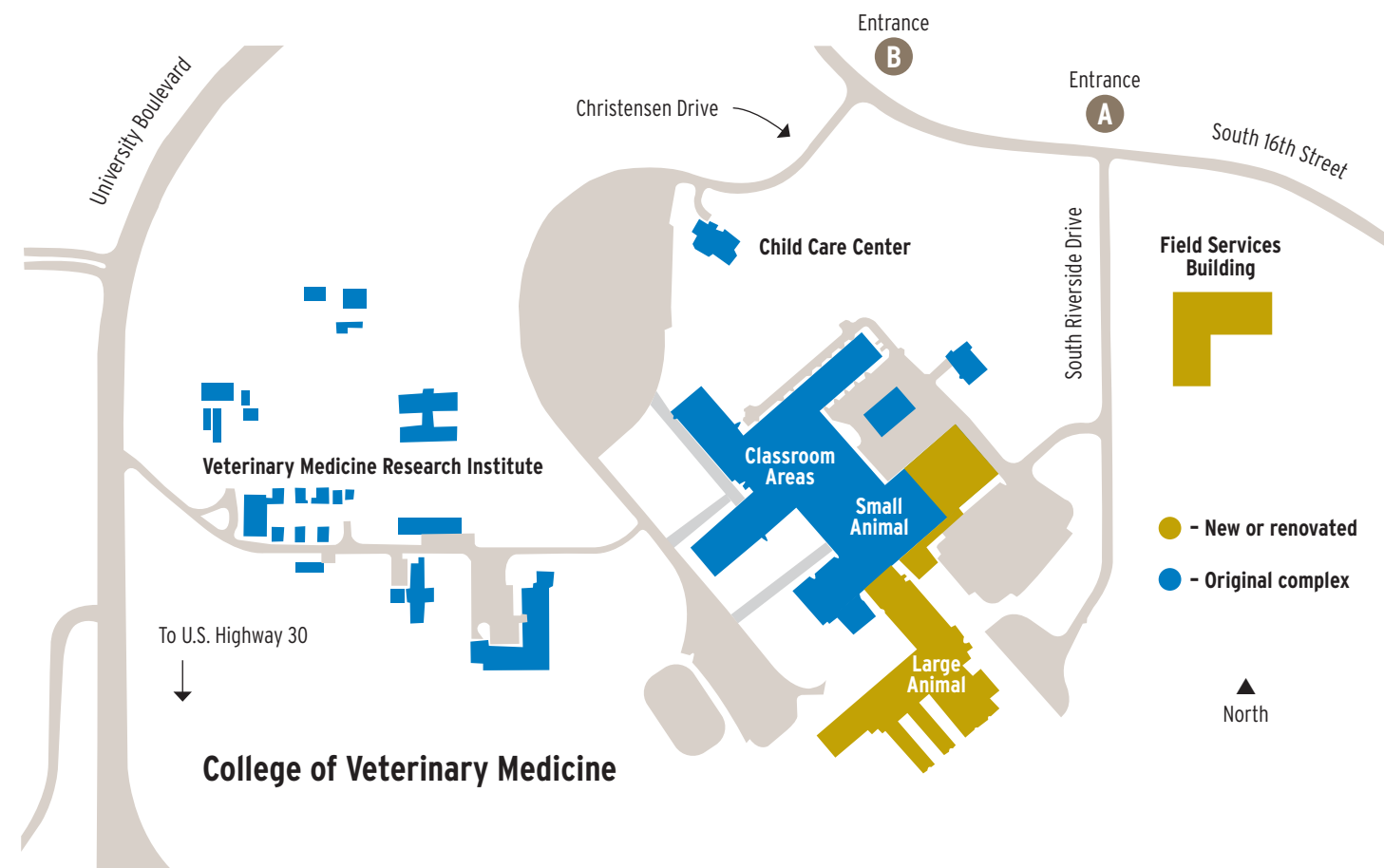
*Veronica Lorson Fowler ('84 JLMC) is an Ames freelance writer and editor and a former Des Moines Register reporter.*

### ABOUT THE ISU COLLEGE OF VETERINARY MEDICINE

- The ISU College of Veterinary Medicine was founded in 1879 as the first public veterinary college in the nation.
- The college is a cornerstone of one of the world’s largest concentrations of animal health professionals, with the USDA’s National Animal Disease Center, the National Veterinary Services Laboratory, and the Center for Veterinary Biologics in Ames, Iowa.
- Academic departments include biomedical sciences, veterinary clinical sciences, veterinary diagnostic and production animal medicine, veterinary microbiology and preventive medicine, and veterinary pathology.
- 184 faculty, including 72 board-certified veterinarians.
- The college is fully accredited by the American Veterinary Medical Association.

## UNDER ONE ROOF

Expansion and renovation was made possible through gifts from more than 4,900 alumni and friends



**T**he outstanding reputation of Iowa State’s College of Veterinary Medicine is well known in Iowa, the nation and the world. In addition to offering leading-edge treatment, Iowa State is recognized for providing an exceptional education to tomorrow’s veterinary specialists and spearheading groundbreaking research in animal and human disease.

With so much activity under one roof, it’s no wonder that the college needed a larger facility that is better matched to the quality of its programs and mission.

Made possible through private donations and appropriations from the state of Iowa, the expansion and renovation of the Dr. W. Eugene and Linda Lloyd Veterinary Medical Center has resulted in a world-class facility to support the college’s commitment to cutting-edge care, education, and research. Phase I of the project, completed in 2008, provided a new

108,000-square-foot, state-of-the-art equine and food animal hospital; Phase II, completed this summer, involves a major renovation of the small animal hospital that adds another 17,000 square feet of space to more than double its size.

The project became a reality due in large measure to the support of thousands of Iowa State benefactors, with gifts from more than 4,900 alumni and friends, including 1,500 first-time donors to the college. In addition to a lead gift to the project from W. Eugene ('49 DVM, PhD '70 veterinary pathology) and Linda ('10 honorary) Lloyd, the Lied Foundation Trust of Las Vegas, Nev., through its trustee, native Iowan Christina Hixson ('06 honorary), was the lead donor for the small animal hospital expansion. When the facility is dedicated this fall, it will be known as the Hixson-Lied Small Animal Hospital.

Altogether, the revitalized complex creates the synergetic environment that already is attracting greater numbers of quality students to Iowa State to study with the college’s faculty - renowned researchers, award-winning professors and expert clinicians - who are carrying out the innovative teaching, specialized care, and pioneering research in veterinary medicine needed to meet the challenges we face both in animal and human health.

In addition to new facilities, the College of Veterinary Medicine has benefitted from private fundraising that has established 16 endowed and expendable faculty positions, including the Dr. Stephen G. Juelsgaard Dean’s Chair in Veterinary Medicine, currently held by College of Veterinary Medicine Dean Lisa Nolan. Juelsgaard received a 1972 doctor of veterinary medicine and a 1975 MS in veterinary clinical science from Iowa State.





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