

A PATH TO THE FUTURE of Veterinary Medicine



School of
Veterinary Medicine
UNIVERSITY OF WISCONSIN-MADISON



ANNUAL REPORT
2013-2014

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A Path to the Future of Veterinary Medicine

Annual Report 2013-2014

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School of Veterinary Medicine

UNIVERSITY OF WISCONSIN-MADISON

*Advancing animal and human health
with science and compassion*



OUR PATH: The Strategic Plan

I am pleased to share with you our annual report for the 2013-14 academic year.

We reached many milestones throughout the last fiscal year. September 2013 marked 30 years since our first class of veterinary medical students enrolled, serving as an opportunity to highlight the school's history and the long, trying path that led to its creation. Looking back at what we have accomplished in those three decades, from training more than 2,000 veterinarians to advancing the dairy industry to improving how we combat infectious diseases, it's easy to see that the state is better for having the school here.

Our partner, the International Crane Foundation, also celebrated an anniversary, marking 40 years of conservation. Our relationship with this organization, which provides a unique experience for students and residents interested in zoological medicine, is still going strong.

We also achieved several milestones in the strategic plan we set forth in May 2013. As a reminder, we established seven strategic priorities to help us achieve our mission and vision in the near term and guide us to the future of veterinary medicine. In a nutshell, the priorities focus on recruiting and retaining faculty; strengthening research; sparking innovation in the professional curriculum; recruiting diverse, high-quality students; supporting UW Veterinary Care; fostering community throughout the school; and training the next generation of academic veterinarians. You can learn more at www.vetmed.wisc.edu/strategic-plan/.

We created key initiatives to help us make progress in these priorities, and we have achieved a great deal in a short period of time. You can view our six-month progress report at www.vetmed.wisc.edu/six-month-progress-report/. And of course, please read on to learn about some of the school's many other accomplishments from the entire 2013-14 fiscal year, and see for yourself how we're on a path to the future of veterinary medicine, from our curriculum and clinical service to our research and graduate training.

Sincerely,

A handwritten signature in black ink that reads "MARK D. MARKEL".

Mark D. Markel, DVM, PhD
Dean
Vilas Distinguished Achievement Professor



Instructional specialist Kristen Cooley coaches Loren Heusel, Class of 2015, on how to properly place an intravenous catheter on a model that she built for student use in the new Clinical Skills Training Center.

The VETERINARY MEDICAL EDUCATION Path

Efforts to enhance the professional curriculum at the UW School of Veterinary Medicine lie at the heart of the strategic plan. To create the best learning experience possible, the school continues to push boundaries in veterinary medical education by creating new opportunities and utilizing the latest technologies.

This includes hiring a certified veterinary technician to provide full-time instruction in the Clinical Skills Training Center, a dedicated room filled with dozens of interactive models, equipment, and simulators where students can learn, practice, and refine basic clinical skills, from starting IVs to dressing wounds to perfecting sutures, all during their free time. This laboratory is open to all students, interns, residents, staff, and faculty and has been integrated into several courses in the veterinary medical curriculum.

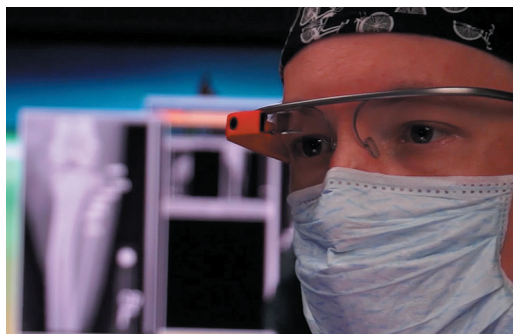
Faculty have also begun to utilize Google Glass to aid in both the clinic and the classroom. Resembling a sleek pair of eyeglasses, the wearable computer operates like a virtually hands-free smart phone. Wearers use voice commands, an optical display, and a tiny touchpad to communicate with the Internet, take photos, or record video. Faculty are currently using Google Glass to take first-person video and photos of various procedures for use in lectures and online learning modules, and they are exploring other ways the device can enhance veterinary medical care and instruction.

With innovations like these, the school continues to attract an impressive pool of talented students with a diverse range of interests and academic backgrounds. The 1,267 applications received for 87 spots in 2014 are a clear indication of the school's

desirability and status among those seeking a veterinary medical education. The school continues to make every effort to balance affordability with the need to remain competitive among its peers. Although a top-ranked institution, the school's tuition is among the lowest in the nation, and over \$1 million in student aid was distributed in 2013-14 to help reduce student debt loads.

Other Highlights

- Launched the first of many core competency modules. These are online, small group, and self-directed learning exercises that expose students to rare cases or other situations they did not experience while on rotations.
- Added live animal labs to the exotic animal course for third-year students. This gives students the opportunity to learn how to handle and conduct wellness exams on some common (and uncommon) household pets, from rabbits and guinea pigs to geckos and iguanas.



University Communications

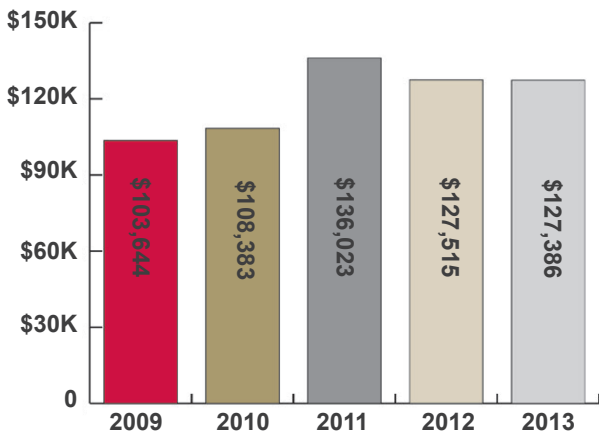
Google Glass in use during canine orthopedic surgery.



Students examine the inside of a snake's mouth during a live reptile and amphibian lab.

Fast Facts

AVG. STUDENT DEBT LOAD UPON GRADUATION*



* Includes debt incurred during prior undergraduate/graduate education

RECENT CLASS STATS

CLASS	GPA	APPS
2018	3.72	1,267
2017	3.67	1,209
2016	3.70	957
2015	3.73	1,183
2014	3.69	1,047

See more Class of 2018
Fast Facts on page 13.



Mandy Henderson, CVT, tends to June, a shepherd-mix puppy who recovered from parvovirus in UW Veterinary Care's new small animal isolation unit.

The CLINICAL SERVICE Path

The school's strategic plan focuses on supporting and enhancing UW Veterinary Care, the clinical arm of the school. Part of this effort includes ensuring that the clinic has the equipment and facilities it needs to provide the best care it can for patients and clients while offering students the most valuable veterinary medical training. The school took many leaps forward in this area in 2013-14.

UW Veterinary Care underwent several facility enhancements, from the most basic but necessary, such as replacing an aging floor in the Large Animal Hospital, to projects of a grander scale, like building a new small animal isolation unit. The new unit provides a dedicated space for animals with contagious diseases to rest and recover while they are being treated without

putting other patients at risk. In addition, the pharmacy remodeling project, which aims to make that space larger and more efficient, was nearing completion as of the publication of this report.

Of course, veterinary medical facilities are only as good as the equipment they house, and UW Veterinary Care has acquired some of the best. For example, the clinic added the following: four new ultrasound units (three of them portable) with better resolution, which make diagnoses easier and help cut down on client wait times; a laser therapy machine that aids in wound healing; and a new oral surgery unit that utilizes ultrasonic microvibrations to cut bone tissue while minimizing trauma to soft tissue, which improves the safety and effectiveness of many procedures.

Donations helped make many of these improvements and purchases possible.

The best facilities and equipment lead to wonderful success stories for patients. From the typical to the highly unusual, UW Veterinary Care had many this year. On one end of the spectrum, the new small animal isolation unit helped three shepherd-mix shelter puppies recover from parvovirus. On the unusual end (and perhaps a first of its kind), one veterinarian teamed up with a doctor from UW Health to get a show cow back in the ring by repairing her leaky teat with a procedure used to treat incontinence in humans.

These are just a few examples. UW Veterinary Care has put performance and training dogs back in business, granted families more time with their pets through pacemakers and cancer treatments, saved lives through emergency and critical care, and treated a host of maladies with innovative therapies and surgeries.

Learn more at www.vetmed.wisc.edu/category/success-stories/.



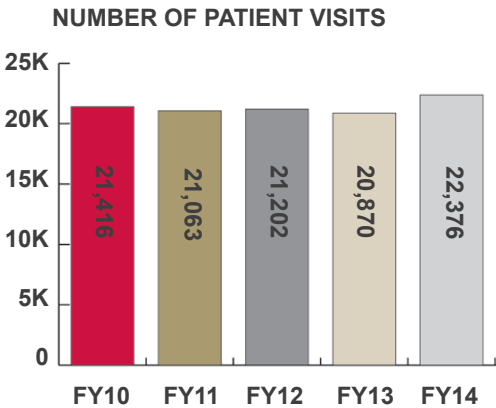
Kathy DeBruin, Courtesy Golden Oaks Farms

After suffering from a leaky teat, Vertigo is back in the show ring thanks to a collaboration between UW Veterinary Care large animal surgeon Samantha Morello and UW Health urogynecologist Dobi Giles.



The Dentistry and Oral Health Service's new Piezosurgery unit utilizes ultrasonic microvibrations to cut bone tissue while minimizing trauma to soft tissue, which improves the safety and effectiveness of many procedures.

Fast Facts





Timothy Stein, assistant professor of oncology, and his research team identified a possible link between a single protein and canine osteosarcoma. Here postdoctoral fellow Lucas Rodrigues replaces the culture medium in which the cancer cells are grown.

The RESEARCH AND GRADUATE TRAINING Path

Another key priority in the strategic plan is strengthening basic, translational, and clinical research, and the school has made a great deal of progress toward this end through focused investment. The Dean's Office has allocated \$10,000 annually for pilot research projects and bolstered the school's Companion Animal Fund and Equine Fund research grants with an additional \$30,000. This grant competition helps faculty further research that will specifically enhance the care of companion animals, work that often does not attract support from major foundations and federal agencies.

In addition to financial assistance, the school has found new ways to provide additional grant-writing and statistical support for researchers by partnering with the UW Institute for Clinical and Translational

Research and offering a workshop for clinician scientists to help train residents and promote bench-to-bedside research.

New equipment acquisitions, made possible by generous donations, have also improved the school's research capabilities. Recent purchases include a MALDI-TOF mass spectrometer, a breakthrough technology that helps faculty and clinicians more rapidly identify bacteria, yeast, and fungi through protein analysis, and a new four-laser, 18-color flow cytometry unit that will help the school's investigators pursue cutting-edge work.

This support, combined with the hard work and dedication of faculty, staff, and students, has helped the school's research programs thrive in a challenging funding environment. Despite the recent federal

government shutdown, sequestration, and budget cuts, grant support grew by 14 percent between 2012-13 and 2013-14. This truly underscores the quality of the work that goes on here.

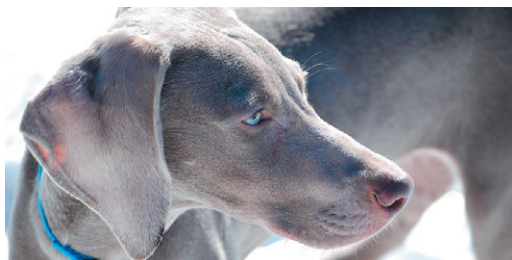
So it comes as no surprise that the school's faculty continue to make significant advancements in animal and human health—like discovering potential new targets for cancer treatments, uncovering the cause of a canine tremor disorder, developing better and safer ways to combat heel warts in cows, and discovering a new species of tick in an unlikely place—all while earning national recognition for their efforts (see page 12).

And the list goes on. Learn more at www.vetmed.wisc.edu/category/research-news/.



James Jones

Tony Goldberg, professor of pathobiological sciences (above right), made international headlines when he discovered a potential new species of tick—in his nose.

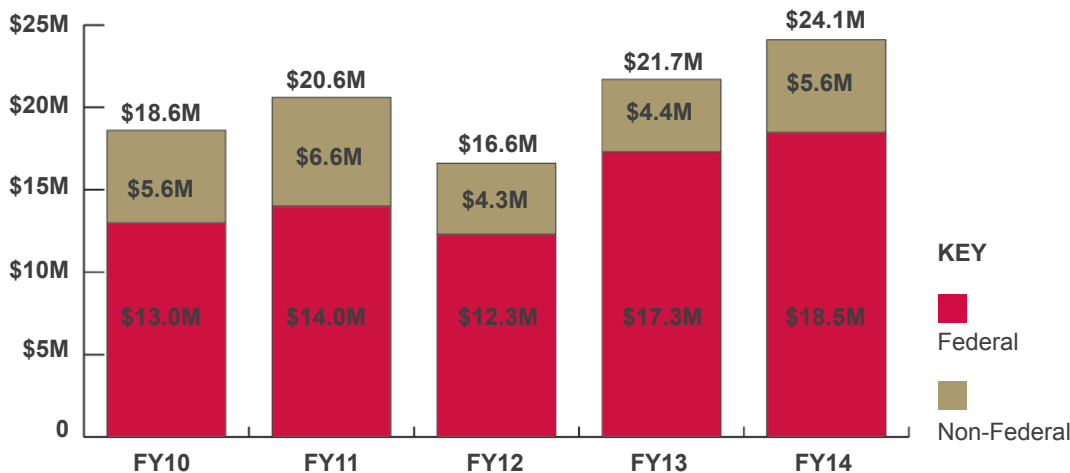


ISstock

Ian Duncan, professor of neuroscience, and his research team found a gene mutation that causes a tremor disorder commonly found in Weimaraners.

Fast Facts

TOTAL RESEARCH AND EXTRAMURAL AWARDS (in millions)





A “student” at UW’s Grandparents University learns about cardiology from a veterinary medical student volunteer while her grandfather documents the experience.

The OUTREACH AND ENGAGEMENT Path

The welfare of the people of Wisconsin remains a crucial component of the mission of the UW School of Veterinary Medicine. Knowledge can enrich lives, so each year, faculty, staff, and students from the school and UW Veterinary Care make every effort to share their expertise and services with the public through a variety of events, hosted both on and off campus.

In addition to these events, the UW Veterinary Care Dentistry and Oral Surgery Service offered free oral healthcare examinations for service dogs in June 2014. Faculty, residents, and students from the Special Species Service continued to provide volunteer care at Four Lakes Wildlife Center, a division of the Dane County Humane Society dedicated to helping injured, ill, and orphaned wildlife.

The Dairyland Initiative—a program that works with farmers to optimize cow comfort, health, and milk production—continued to provide its web-based resources free of charge to farmers and university extension agents across the country by earning a grant from the Dean Foods Foundation.

Representatives of the school also engaged extensively with the news media. Faculty, staff, and students were referenced more than 100 times in a host of news outlets around the world. Sandi Sawchuk made 24 appearances on Wisconsin Public Radio and the CBS affiliate in Madison, Wis., fielding pet questions from the public and offering an assortment of valuable advice.



Christoph Mans (2)



Channel3000.com

Top Left: Christoph Mans, clinical assistant professor of zoological medicine, repairs a snapping turtle's shell fracture while volunteering at the Dane County Humane Society's Four Lakes Wildlife Center.

Top Right: Certified veterinary technician Charisma Chadwick introduces a youngster to a corn snake during UW-Madison Day at the Wisconsin State Fair.

Left: Sandi Sawchuk of UW Veterinary Care's Primary Care Service takes questions from callers during one of her numerous appearances on WISC-TV, Madison's local CBS affiliate.

OUT AND ABOUT: Where You Can Find Us

Dog Paddle (Capital K9s Benefit)

Four Lakes Wildlife Center

Grandparents University at UW-Madison

Midwest Horse Fair

Military Kids University

Summer Enrichment Program (UW School of Education)

UW-Madison Day at the Wisconsin State Fair

UW-Madison Science Expeditions

Wisconsin Dog Fair

Wisconsin Veterinary Medical Association Annual Convention

World Dairy Expo

Coming in 2015: Open House

FUNDING THE FUTURE

Many of the accomplishments mentioned in this report were made possible by donations. Contributions big and small are hugely important to the school's success. Gifts help us leverage additional resources, respond to emerging needs, and target strategic priorities. They help us make new discoveries and save lives. If you want to make a difference in animal health, please consider a gift.

You can return the enclosed envelope or donate online at www.vetmed.wisc.edu/giving.

For more information on giving, contact:

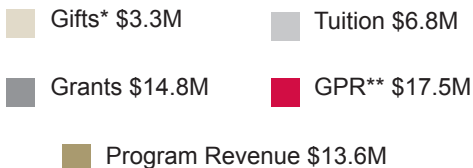
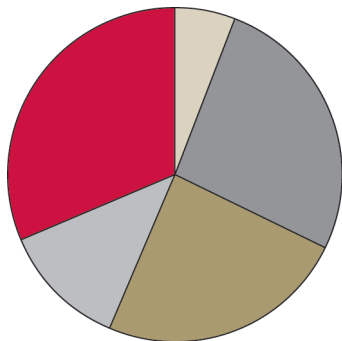
Pat Bowdish, pat.bowdish@supportuw.org, 608-890-1515

Heidi Kramer, heidi.kramer@supportuw.org, 608-890-1230

Fast Facts

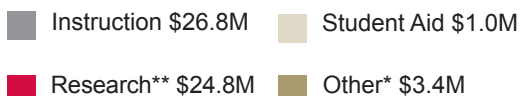
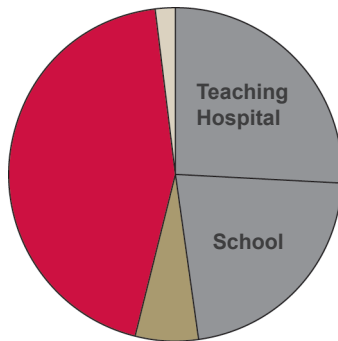
EXPENDITURES BY SOURCE

(in millions)



EXPENDITURES BY PURPOSE

(in millions)



* Student services, public service, and academic support
 ** Primarily research grants and contracts

* The SVM raised \$7.1 million in gifts, pledges, and planned gifts in FY 2013-14

** State appropriations (less estimated tuition and fees)

% OF BUDGET FROM STATE SUPPORT

2009	31%	2012	29%
2010	29%	2013	29%
2011	29%	2014	31%

AWARDS AND HONORS: Highlights

This is not a comprehensive list of awards and honors. It is a representative sample from the 2013-14 fiscal year (July 1, 2013 – June 30, 2014).

Hannah Carey

American Physiological Society August Krogh Distinguished Lectureship for Comparative and Evolutionary Physiology

Yoshihiro Kawaoka

Association of American Veterinary Medical Colleges 2014 Excellence in Research Award

Mark D. Markel

University of California, Davis School of Veterinary Medicine Alumni Achievement Award

Sheila McGuirk

One of *Bovine Veterinarian* magazine's 20 most influential beef and dairy veterinarians

Gordon Mitchell

American Physiological Society Julius H. Comroe, Jr. Distinguished Lectureship for Respiration

Kenneth Nordlund

2013 World Dairy Expo Industry Person of the Year

American Association of Bovine Practitioners Award of Excellence

One of *Bovine Veterinarian* magazine's 20 most influential beef and dairy veterinarians

M. Suresh

University of Minnesota College of Veterinary Medicine's Distinguished Research Alumnus

Oliver is rewarded with a bone after his laser therapy treatment, which UW veterinarians used to manage his pain and enhance healing following a leg injury. Lindsey Culp Snyder, clinical assistant professor of anesthesiology, speaks with Oliver's owner after the procedure.



FAST FACTS: Class of 2018

Primary Areas of Interest of Enrolled Applicants

Students from the incoming Class of 2018 have a diverse range of interests, as indicated on their applications.

Small Animal	21	Equine	7
Food Animal	14	Research/Industry	4
Mixed (Large and Small Animal)	12	Avian/Exotics	3
Wildlife or Zoo Animal Medicine	8	Other	19

Students from the Class of 2018 come to the UW School of Veterinary Medicine from a wide range of geographic regions and more than

50

different undergraduate colleges and universities.

6

Number of DVM students pursuing dual degree options, including Masters or PhDs in the Comparative Biomedical Sciences Graduate Program

Our students represent more than

30

different undergraduate majors.

These include the following:

Accounting	Environmental Studies	Organismic Biology
Animal Science	History	Physiology
Anthropology	Journalism	Premedicine
Art History	Marketing	Spanish
Biology/Biological Sciences	Mathematics	Veterinary Medicine
Biochemistry	Microbiology	(Preprofessional Program)
Business	Music	Wildlife Ecology
Dairy Science	Neuroscience	Zoology

BOARD OF VISITORS: 2014-15

John Baumann
Monroe, WI

Cheryl Brickman
Mequon, WI

Shawn M. Cavanaugh
Wonder Lake, IL

Debbie Cervenka
Winter, WI

Terrence Clark, DVM 1987
Cottage Grove, WI

Tim Connor
Fitchburg, WI

Margo Edl
Wayne, IL

Steven Erickson, DVM 1987
Middleton, WI

Patrick S. Farrell,
MS 1983, DVM 1987
Russell, PA

Evelyn Fryer
Carpentersville, IL

Peter Hanson,
MS 1994, PhD 1997
Bristol, WI

Janet Hoehnen
Milwaukee, WI

Diane Larsen,
DVM 1990, PhD 1999
Duluth, MN

Steve Larson
Fort Atkinson, WI

Jeffry A. Neuenschwander
Chicago, IL

Esther Olson
Belleville, WI

Jill Pelisek
Milwaukee, WI

Janet Raddatz
Plymouth, WI

Thomas Torhorst
Racine, WI

Karen Walsh
Madison, WI

Morrie Waud
Long Grove, IL



Students practice rescue procedures with a horse mannequin during an equine emergency selective course.



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UNIVERSITY OF WISCONSIN-MADISON

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