A GROUNDBREAKING YEAR

School of Veterinary Medicine
UNIVERSITY OF WISCONSIN–MADISON

2021 ANNUAL REPORT

COURTESY BERNARD EASTERDAY

THEN & NOW

ABOVE: History is made as ground is broken for the UW School of Veterinary Medicine (SVM) in 1981. From left to right are several key people involved in the creation of the school and its facility: William O'Rourke, executive secretary of the Wisconsin Veterinary Medical Association; Jan Grignano of the Anthony Grignano Company, which constructed the building; Wisconsin Rep. Gervase Hephner; Susan Hyland, the school's first associate dean for academic affairs; Bernard Easterday, founding dean; and Wisconsin Sen. Thomas Harnisch.

BRYCE RICHTER/UW-MADISON

ON THE COVER: Bucky Badger and Chancellor Rebecca Blank stand with donors and other members of the campus and state community as they take shovels in hand during a building expansion and renovation groundbreaking at the SVM on June 18, 2021 — 40 years after the school broke ground on its current building.

CONTENTS

School of Veterinary Medicine
UNIVERSITY OF WISCONSIN–MADISON

2021 ANNUAL REPORT

Learn more about the ways the UW School of Veterinary Medicine is advancing animal and human health:
vetmed.wisc.edu
uwveterinarycare.wisc.edu
animalsneedheroestoo.com

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This report is also available online at **vetmed.wisc.edu/annual-report**

MESSAGE FROM THE DEAN

"Today we celebrate the beginning of a new era in veterinary medicine at UW–Madison. The construction of this new facility is going to provide the school with a home that befits its reputation and its importance to the university, the state and the nation."

UW–MADISON CHANCELLOR REBECCA BLANK at a June 2021 UW School of Veterinary Medicine groundbreaking ceremony.

Reflecting on the past many months, I find myself again marveling at the rollercoaster we've been on, similar to 2020…

As is true for each of you, I suspect, the COVID-19 pandemic has continued to dramatically impact our lives and work. At the same time, I am heartened that we have achieved many advances on numerous fronts at the School of Veterinary Medicine (SVM), often related directly to our pandemic response.

In July 2020, we were able to resume and maintain in-person clinical instruction (with safety precautions in place) for our fourth-year students throughout the year. For our first three years of classes, critical laboratory experiences were delivered in person, but lectures were typically delivered virtually due to COVID-19 restrictions.

In the spring 2021 semester, all students and employees began weekly COVID-19 testing to be able to enter campus buildings, per new measures the university adopted to enhance the safety of the university community. Together, we rallied to minimize the impact of COVID-19 on the SVM and broader communities.

Although instruction has been challenging and full of moving parts, our faculty, staff, and students have shown tremendous dedication and effort. None of us planned to have to close in-person instruction in spring 2020

or create a hybrid learning experience for students this past academic year. Nonetheless, our faculty and staff worked tirelessly to create outstanding learning opportunities.

If we are to find any silver linings in this horrendous pandemic, one has been the opportunities we've identified to deliver positive and engaging educational experiences virtually. I suspect these best practices will continue to be utilized even after we return to in-person instruction, which we did this fall. On an additional front, our researchers have continued to show tremendous leadership at the forefront of the pandemic response, providing real-time insights and guidance related to vaccine, treatment, and containment strategies.

This past year, the school welcomed two key team members: **Peggy Schmidt**, our new associate dean for professional programs, and **Richard Barajas**, the school's first director of diversity, equity, and inclusion (DEI).

Peggy is dedicated to our veterinary medical students' curriculum as we improve and update how we teach our learners. She leads the school's efforts in pursuing curricular reform and has launched the Program Revision to Enhance Professional Abilities, Relevance, and Excellence in our (PREPARE) Graduates Task Force in partnership with faculty, staff, and external stakeholders. Already she and colleagues have made tremendous progress toward innovating our curriculum and lifelong learning offerings. Our target is to launch a revised curriculum in fall 2023.

Richard, who joined the school in September 2020, oversees the school's diversity and inclusion efforts. This critically important work is made even more significant amidst the difficult but crucial conversations and ongoing issues occurring locally and globally around systemic racism, social justice, and equity, inclusion, and diversity.

We are dedicated to continuing to create a more diverse and inclusive culture within the school and supporting a work and learning environment where all feel invited, involved, and successful. The school has taken many essential steps and will remain focused on forward progress – making diversity a lived value that infuses our curriculum, decision-making, and day-to-day activities. As an important milestone, students who are Black, Indigenous, or from other underrepresented racial and ethnic groups represent one-quarter of the school's two most recent incoming classes. Our Class of 2025, in particular, is the most diverse class the school has ever had. We will continue to increase the representation and inclusion of minority and disadvantaged groups to better reflect society as a whole.

In collaboration with the university's Office of Strategic Consulting, school leadership spent spring through fall 2020 reviewing our mission and vision, as well as our strategic priorities. A new strategic plan articulates five key priorities for 2021-25: leading educational excellence, cutting-edge research and scholarship, delivering outstanding animal care, thriving organization, and vibrant community for all. The school's Diversity, Equity and Inclusion Committee also created a supplemental DEI-focused strategic plan.

This summer, we also created a wellbeing task force, chaired by Associate Dean **Lynn Maki**, that will provide recommendations, anticipated by the end of the year, regarding efforts to enhance the wellbeing of our faculty, staff, and students. Building on national and international strategies to cultivate wellbeing in veterinary medicine, the group is approaching their work through a wide lens that encompasses career, financial, physical, mental, social, individual, and community wellbeing for all school members.

In an exhilarating moment, this June the school celebrated the groundbreaking of our building expansion. On a sunny late spring day, state government leaders, school and university administrators, and other friends and supporters gathered to celebrate the project's future impact. As shovels met dirt, I was elated. This is a milestone we've been working toward for many years.

Thank you to all of you for your support during this exciting phase of the school's history. We would not be where we are today without your advocacy, philanthropy, and camaraderie. I hope each of you stays safe, and I wish you all the best during these challenging times.

ON, WISCONSIN!

MARK D. MARKEL
Dean, UW School of Veterinary Medicine
Vilas Distinguished Achievement Professor

FLAD ARCHITECTS

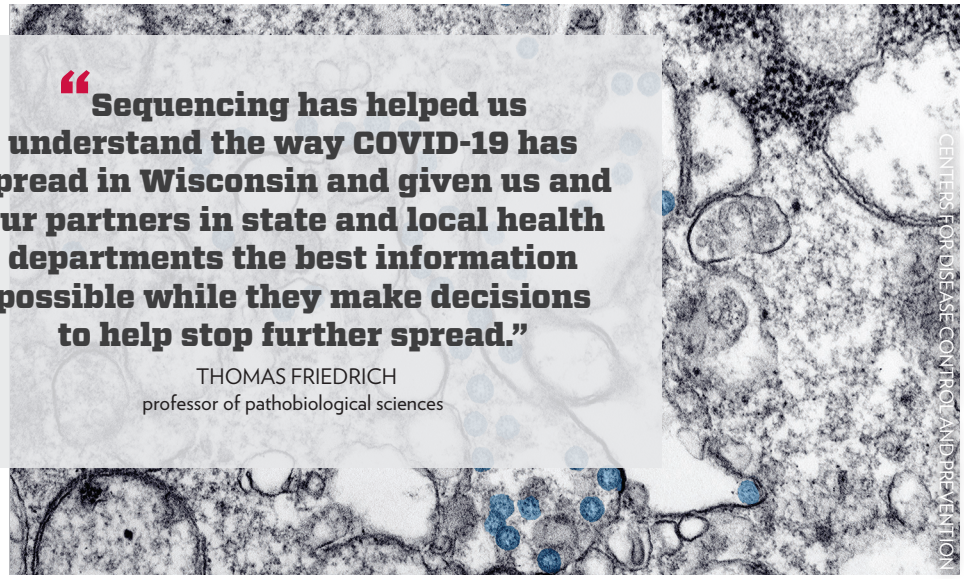
BRYCE RICHTER

Follow Dean Markel ON TWITTER:
@UWVetMedDean

The COVID-19 pandemic has drawn the attention of UW–Madison scientists in all corners of campus. Occupying an outsized quadrant in this work are UW School of Veterinary Medicine researchers, giving their all to better understand, control, and prevent this and future pandemic outbreaks.

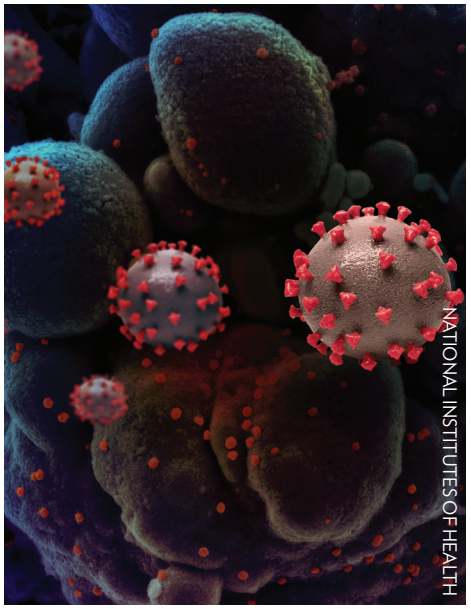
Prominent virology labs got an early start. **Yoshihiro Kawaoka**, a professor of pathobiological sciences, immediately began working toward a vaccine candidate with Madison-based FluGen. He has also been studying how SARS-CoV-2 is transmitted and causes COVID-19.

Last fall, Kawaoka and research professor **Peter Halfmann** found that a strain of the virus that causes COVID-19 mutated in Europe in February 2020 and for a time became the dominant form of the virus across the globe. That study showed that the mutation should not interfere with the effectiveness of COVID-19 vaccines. More recently, Kawaoka led work finding that vaccination with an mRNA vaccine induces antibody responses that would protect people from infection with the gamma variant of the SARS-CoV-2 virus, which has spread worldwide.


CENTERS FOR DISEASE CONTROL AND PREVENTION

"Sequencing has helped us understand the way COVID-19 has spread in Wisconsin and given us and our partners in state and local health departments the best information possible while they make decisions to help stop further spread."

THOMAS FRIEDRICH
professor of pathobiological sciences


NATIONAL INSTITUTES OF HEALTH

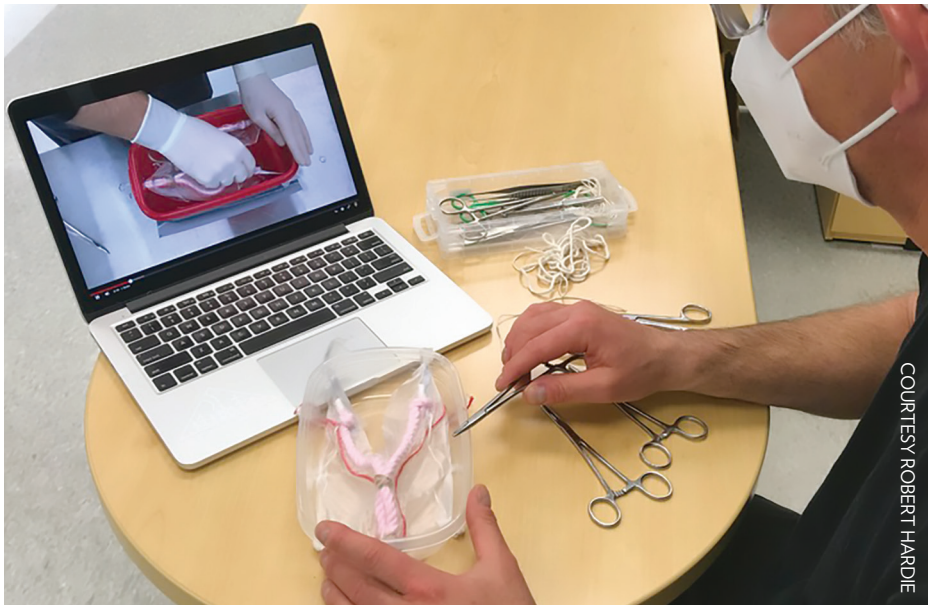
Tracking Variants of Concern

Also front and center in COVID-19 research and response are School of Veterinary Medicine Professor **Thomas Friedrich** and collaborators. From the outset of the pandemic in Wisconsin, Friedrich and David O'Connor of the School of Medicine and Public Health began parsing the genetic sequences of virus samples from positive COVID tests. Together with a large group of scientists at the AIDS Vaccine Research Laboratory, they catalog subtle differences between hundreds of strains of the virus that causes COVID-19.

The SARS-CoV-2 virus accumulates small changes or mutations roughly every other time it transmits from one person to another, leaving genetic fingerprints researchers can track. The team's most pressing concern is surveillance, keeping watch for the arrival of virus variants believed to be more adept at infecting people or possibly carrying mutations that make vaccines and common treatments less effective.

Their work has revealed important details about the spread of the virus in Wisconsin. In a study published last fall in *Nature*


JEFF MILLER/UW-MADISON


COURTESY ROBERT HARDIE

(Left to right): A creative rendition of SARS-CoV-2 virus particles; Sen. Tammy Baldwin listens to a presentation during a tour of the AIDS Vaccine Research Laboratory in University Research Park; Clinical professor Robert Hardie demonstrates surgical knot tying while a student, seen on the laptop, practices the same skills remotely and receives real-time feedback.

Communications, the researchers discovered more than 200 variations on the virus that causes COVID-19 and found that limiting travel was working, as Madison and Milwaukee outbreaks were unrelated.

The team's work has made Dane County one of the leading places in the U.S. where this kind of surveillance is performed. Because their surveillance efforts have been fast, they've been used to help inform real-time public health decisions in the community.

In April, U.S. Sen. **Tammy Baldwin** of Wisconsin visited the lab to recognize the work and discuss the importance of expanding sequencing while preparing for the next public health emergency.

"Tracking new variants is vitally important to our ability to combat this virus and get through the pandemic, and I want to applaud the team at the University of Wisconsin for their incredible work," she said.

Helping Students Excel Online

Amidst the pandemic, faculty and instructional staff became students, studying and adopting new ways to facilitate virtual or hybrid instruction. Throughout, instructors exchanged knowledge and best practices informally and through scheduled weekly discussions, ensuring that an exceptional education continued to be delivered.

"If people are struggling with how to do something, we call and help each other," **Karen Hershberger-Braker DVM'10**, a lecturer in comparative biosciences and pathobiological sciences, told *JAVMA* News. "There is a learning curve. We are trying to support each other. The unity has been so positive."

As one example of the quick, creative response, **Robert Hardie**, clinical professor of small animal general surgery, spearheaded an effort to move online the hands-on surgery lab for third-year veterinary medical students. The school provided each student with individual surgery kits for remote use and individual teaching models made by instructional specialists **McLean Gunderson** and **Tina Wahl**.

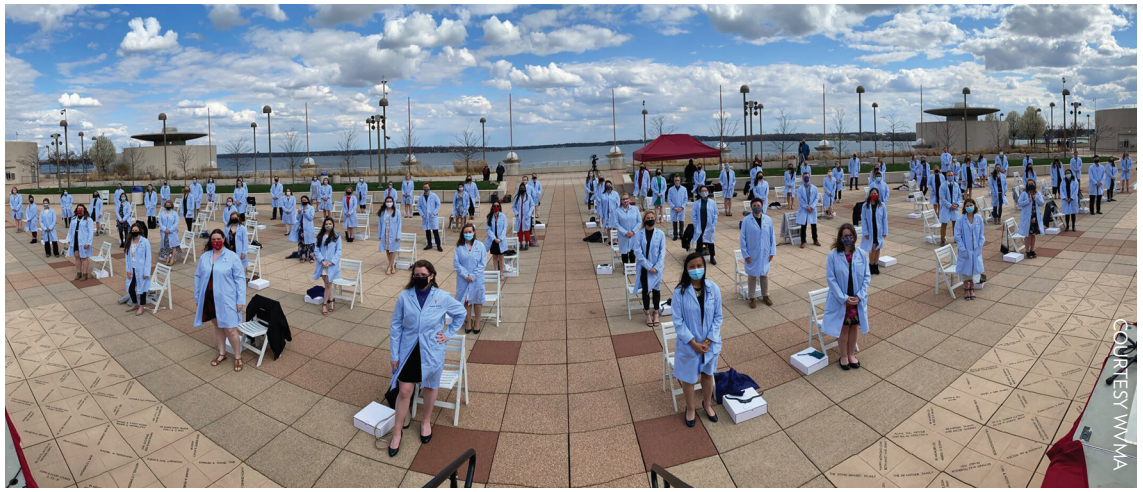
At home, students practiced their technical surgery skills such as instrument handling, suturing, and knot tying. Then they met remotely with an instructor and fellow students via Blackboard Collaborate, a video conferencing platform, to receive direct feedback. By tilting their laptop or tablet camera down to show their hands, students could demonstrate their surgical technique and receive live commentary. In the end, remote instruction increased direct one-on-one instruction, student feedback was positive, and the majority of students felt very prepared for in-person surgical labs.

Across the board, faculty, staff, and students showed incredible adaptability and dedication. Much learned from this past year will influence future instruction and assessment.

TRAINING FUTURE VETERINARIANS

At the School of Veterinary Medicine, we are ultimately preparing our students to be as successful as possible in contributing to health and wellbeing through the many career opportunities in the profession.

So, it fills us with pride when members of our student body are recognized for their exceptional leadership and skills, and for being good stewards of the community. In 2020-21, we saw numerous examples of this.



DVM students from the Class of 2022 participate in a blue coat ceremony hosted by the Wisconsin Veterinary Medical Association (WVMA) at the Monona Terrace in Madison.

From March 2020-21, **Marie Bucko DVM'21** served as president of the Student American Veterinary Medical Association (SAVMA). This national organization, comprised of 37 student chapters and more than 17,000 student members, aims to support all veterinary students in improving their lives, education, and career.

In December, **Melissa Sheth DVM'21** was named the 2021 recipient of the Patricia M. Lowrie Diversity Leadership Scholarship fromthe American Association of Veterinary Medical Colleges. This scholarship recognizes veterinary students who have demonstrated exemplary promise as future leaders, made significant contributions to enhancing diversity and inclusion in academic veterinary medicine, and consistently addressed inequities and un-derrepresentation in the veterinary profession.

Then in January, the school's chapter of **Veterinarians for One Inclusive Community for Empowerment (VOICE)** won the 2020-21 VOICE National Chapter of the Year Award. VOICE is a national student-run organization that seeks to increase awareness, respect, and sensitivity to differences among all individuals and communities in veterinary medicine. This is the second time in three years the Wisconsin chapter has received this honor (previously in 2019). The award recognizes exceptional events and programming that support a positive and welcoming environment and an understanding of diversity and inclusivity within the local and academic community.

Curriculum Revision

There is perhaps no more important priority for our Doctor of Veterinary Medicine program than ensuring the curriculum is relevant for today's graduates. To focus the curriculum on what is most necessary for our graduates to know and perform for every facet of their future veterinary work, in August 2020 the UW School of Veterinary Medicine launched a multi-year curriculum revision process.

The revised curriculum will have a foundation in Competency-Based Veterinary Education, allowing students to grow in the nine domains of competence developed by the American Association of Veterinary Medical Colleges.

Under the leadership of **Peggy Schmidt**, associate dean for professional programs,

a PREPARE Graduates Task Force is guiding this multi-phase, multi-year change. The task force includes clinicians, research faculty, instructional staff, administrators, students, alumni, and external stakeholders from organized veterinary medicine. The group is using the best available evidence in teaching and learning and feedback from workshops with faculty, staff, and students to guide their efforts.

Recently, the task force shared proposed curricular structures for the revised curriculum with the SVM community and stakeholders. Additional workshops and listening sessions will further refine the curriculum, which the school plans to implement in fall 2023.

Addressing Educational Debt

Graduates of the UW School of Veterinary Medicine have a lot to be proud of — and their financial achievements are just one such factor. From the American Veterinary Medical Association's latest annual Economic State of the Veterinary Profession report, UW–Madison graduates have the fifth-lowest median debt and fifth-lowest debt-to-income ratio compared to the other 32 veterinary medical schools in the nation.

Leaders and educators within the school and the greater veterinary medical community have been working together to address veterinary medical student debt and the financial health of the profession. This includes providing our students with generous financial aid awards to promote a diverse and successful graduating class and focused financial training at crucial points in the education.

Related, the school created a financial skills workshop series for DVM students in collaboration with the UW-Madison Office of Student Financial Aid. This ongoing series covers financial aid, tuition payment options, credit management, budgeting, student loan repayment and management, and retirement accounts.

We continue to incorporate new opportunities to help students and graduates flourish, including providing resources for fourth-year students to prepare financially for the next phase of professional life. For example, for the Class of 2021, the school coordinated an educational symposium covering financial and student loan planning, budgeting, insurance needs, contract negotiation, and more, as well as private financial counseling meetings.

DVM Student Debt Load* Upon Graduation

** includes those with no DVM debt, total educational debt*

UW AVERAGE
$132,263

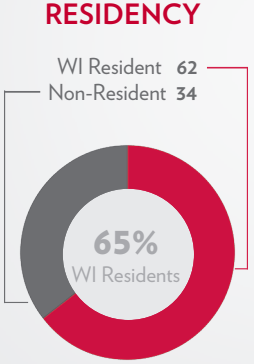
NATIONAL AVERAGE
$169,742

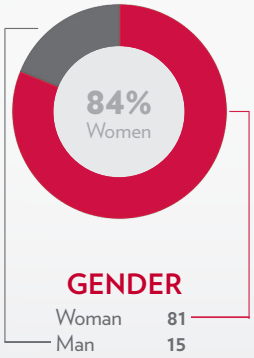
Class of 2025 // AT-A-GLANCE

96 STUDENTS ACCEPTED

out of **1,007** applicants
186 WI RESIDENTS
821 NON-RESIDENTS

RESIDENCY





39 Undergraduate colleges & universities represented

3.58 AVERAGE GPA

ACADEMIC BACKGROUNDS

22 different undergraduate majors represented

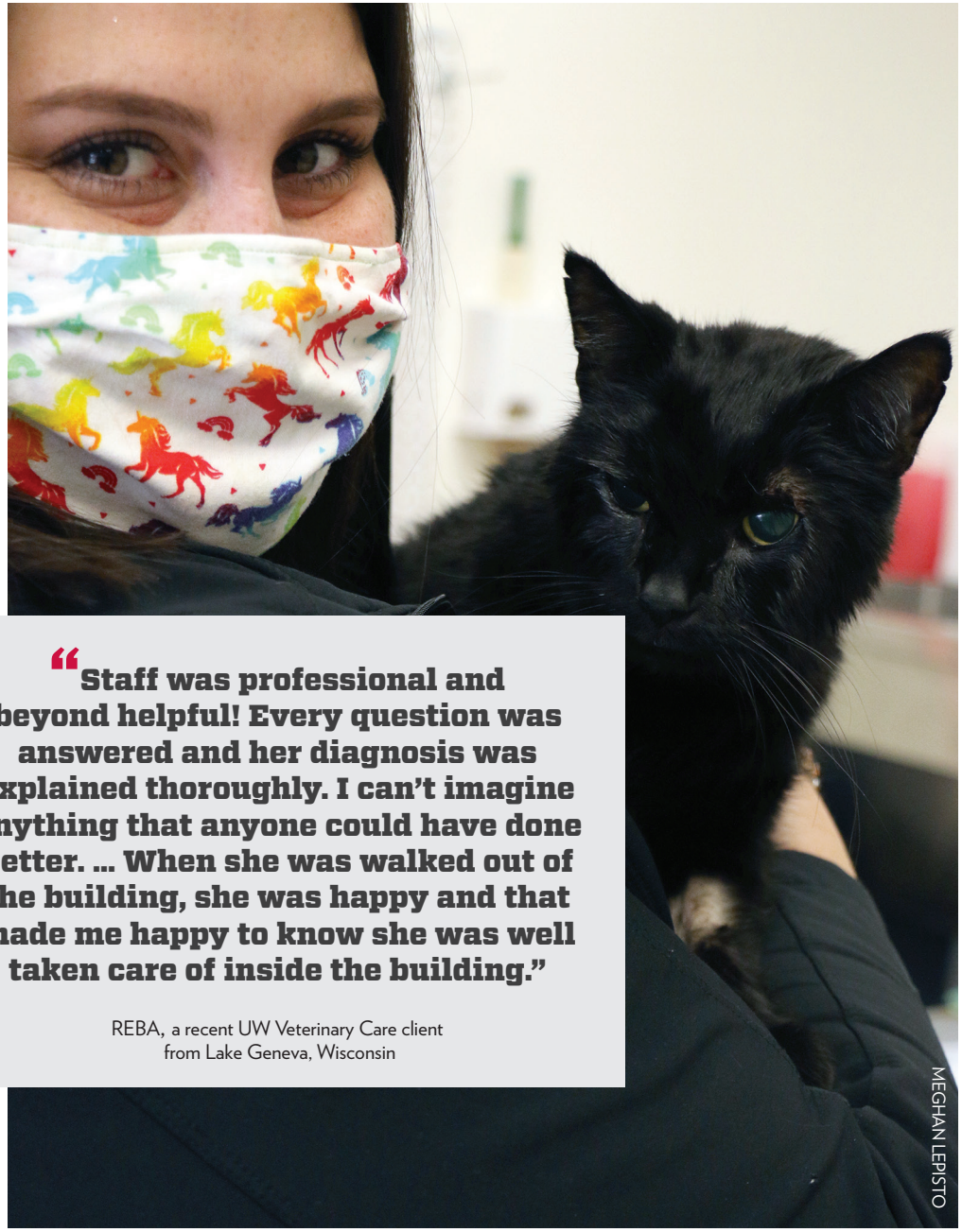
- Animal Science
- Biochemistry
- Biochemistry & Molecular Biology
- Biological Sciences
- Biology
- Biomedical Engineering
- Biomedical Sciences
- Biotechnology
- Chemical Engineering
- Chemistry
- Classics
- Dairy Science
- Entomology
- Integrative Biology
- Mathematics
- Microbiology
- Molecular Biology
- Neurobiology
- Neuroscience
- Organismic Biology
- Spanish
- Zoology

PRIMARY AREAS OF INTEREST

- SMALL ANIMAL - **46**
- FOOD ANIMAL - **16**
- OTHER* - **9**
- EQUINE - **6**
- MIXED - **6**
- AVIAN/EXOTICS - **4**
- RESEARCH/INDUSTRY - **4**
- ACADEMIA - **3**
- WILDLIFE/ZOO - **2**

** Includes pathology, public health, lab animal medicine, and undecided*

DELIVERING COMPASSIONATE CARE



MEGHAN LEPISTO

> **"Staff was professional and beyond helpful! Every question was answered and her diagnosis was explained thoroughly. I can't imagine anything that anyone could have done better. ... When she was walked out of the building, she was happy and that made me happy to know she was well taken care of inside the building."**
>
> REBA, a recent UW Veterinary Care client from Lake Geneva, Wisconsin

Serving nearly 30,000 patient visits in the 2020-21 fiscal year, UW Veterinary Care clinicians persevered through the many complications of the COVID-19 pandemic. They provided exceptional patient care, client communication, and clinical teaching while working to keep themselves and others safe.

The team's dedication and coordination in the face of these challenges meant the world to the families served. "Staff was professional and beyond helpful," "My experience was awesome," "There is no other pet hospital that can compare to UW-Madison," "I think UW Vet Care is the BEST," and "There could not have been a more caring staff" are among just some of the client comments received throughout the year.

Ready to Lead

Leading the hospital through the complex work of adapting to the first year-plus of the pandemic was **Ruthanne Chun DVM'91**. She inspired faculty and staff to persevere for students, patients, clients, and referring veterinarians, both amid COVID-19 and across her more than a decade of tenure as hospital director. This June, Chun handed the reins of associate dean for clinical affairs and teaching hospital director to **Chris Snyder**, a clinical professor in Dentistry and Oral Surgery.

From Snyder's perspective, he has now come full circle on a journey that began 16 years ago at the school. Snyder joined UW Veterinary Care in 2005 for residency training in veterinary dentistry and oral surgery. His residency mentor was veterinary dentist **Bill Gengler**, who at the time held the associate dean role that Snyder now fills.

Snyder believes educators can have an immense impact on veterinary patients, practitioners, and students in training, and he looks forward to serving those within and beyond the school.

(Opposite page) Veterinary technician Ashley Onsager holds radiation oncology patient Davis. (Left) Clinical assistant professor Seth Eaton performs an eye exam on an equine patient in the Morrie Waud Large Animal Hospital. (Right) Clinical assistant professor Nathaniel Van Asselt and veterinary technician Jennifer Borgen smile with Mac, the first oncology patient to receive treatment using the hospital's new radiotherapy machine.

As work gets underway on the school's expansion and renovation, the future looks bright for UW Veterinary Care. The building project will more than double the size of the small animal hospital and significantly improve the large animal hospital.

These new and expanded hospital facilities – planned for completion in 2024 – will reduce space shortages, improve client access to clinical expertise, and reduce wait times for high-demand specialty services. Enhancements include species-specific waiting areas, a covered arena for year-round equine lameness and neurological exams, and space to fit the diagnostic equipment that today's cases demand.

Superior System

UW School of Veterinary Medicine oncologists are world-renowned for advancing clinical treatments and technologies for dogs and cats with cancer. The hospital's Oncology Service sees thousands of patient visits annually and the school is a leader in comparative oncology research aimed at improving the health and wellbeing of animal and human cancer patients.

A cutting-edge radiotherapy machine installed in fall 2020 at UW Veterinary Care continues this legacy. UW Veterinary Care is currently the only veterinary medical hospital globally to offer this treatment. The system provides several advantages for companion animals and their care providers, from tumor tracking and precision to new treatment possibilities.

Most significantly, the upgraded system provides real-time, adaptive motion tracking of tumors. As a tumor moves due to breathing, digestion, or patient movement, treatment moves with it – the delivery beam is continuously synchronized to the tumor position. This ensures the tumor gets all the radiation it needs while surrounding tissues get as little radiation as possible.

The real-time tracking opens up new treatment opportunities for cancers in the abdomen and thorax — including lung, heart, liver, and kidney tumors — where the proximity of vital organs and other sensitive tissues made radiation therapy previously difficult or impossible.

Gifts to the School of Veterinary Medicine's Pets Make a Difference Fund — inspired by the late golden retriever **Scout**, whose cancer journey and care provided at the UW School of Veterinary Medicine were spotlighted in WeatherTech's 2020 Super Bowl commercial — helped make possible this significant equipment upgrade.

PATIENT VISITS
AT-A-GLANCE (2020-21)

- Canine - **21,171**
- Feline - **4,817**
- Equine - **900**
- Avian - **745**
- Lapine - **786**
- Bovine - **215**
- Other* - **1,282**

*includes Rodentia, Reptile, Porcine, Mustelidae, Camelid, Insectivora, Caprine, Marsupial, Ovine, Primate, Fish, Amphibian, and other mammals.

FOSTERING NEW SCIENTISTS & NOVEL DISCOVERIES

Have you ever wondered how parasitic worms wriggle through their hosts and how this migration might be disrupted to stop disease? Or how the body's own immune system can be primed to fight cancer? Over the past year, UW School of Veterinary Medicine scientists answered these questions and many more.

Supported by $32 million in grant funding and extramural support, our faculty, staff, and students advanced cutting-edge research and scholarship across basic, clinical, and translational studies. When divided across the school's 54 tenure track faculty, that translates to nearly $595,000 of research support per tenured faculty member. This work benefits both animals and people, from investigating infectious diseases and pursuing treatment strategies to advancing clinical studies or combating debilitating diseases.

The school also added several new faculty members with expertise in reproductive science, developmental biology, comparative ophthalmology, respiratory disease, and more. And we continued to support, train, mentor, and inspire the next generation.

Read on to learn more about some of this year's highlights and impacts.

$32.1M

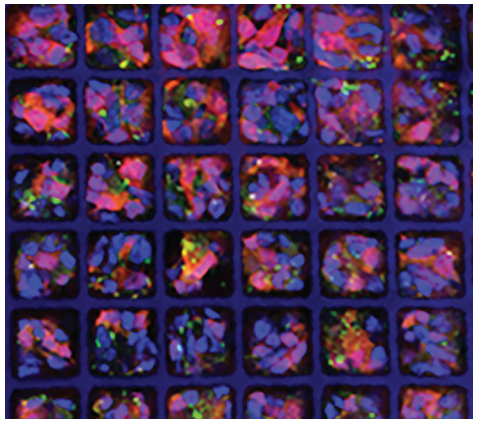
TOTAL RESEARCH & EXTRAMURAL AWARDS

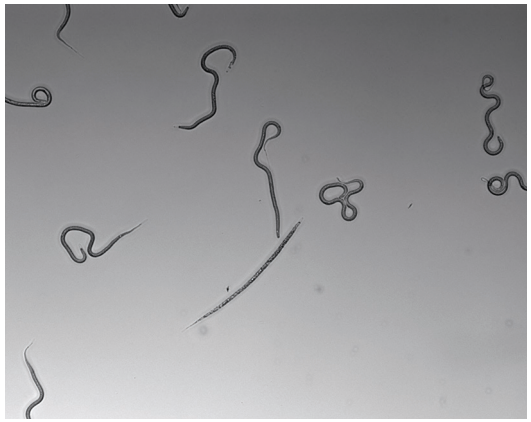
(FEDERAL & NON-FEDERAL)

Returning Sight

Tens of millions of people worldwide are affected by diseases like macular degeneration or have had accidents that permanently damage the light-sensitive photoreceptors within their retinas that enable vision. The human body is not capable of regenerating those photoreceptors, but new advances by medical researchers and engineers at UW–Madison, including **Allison Ludwig**, a graduate student in the School of Veterinary Medicine's Comparative Biomedical Sciences program, may provide hope for those who have vision loss.

The cross-disciplinary team made new photoreceptors from human pluripotent stem cells, then developed a micro-molded scaffolding photoreceptor "patch." This patch is designed to be implanted under a damaged or diseased retina to precisely deliver and hold the photoreceptors in place while forming appropriate connections.

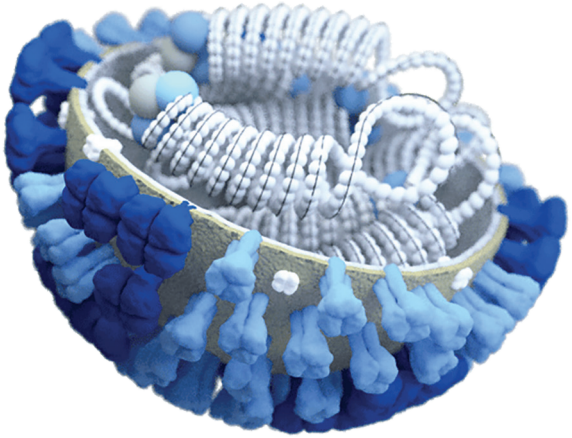




Worms, Get Lost

School of Veterinary Medicine scientists, including professor **Mostafa Zamanian** and postdoctoral fellow **Nicolas Wheeler,** have provided the first look at the genetic underpinnings of parasitic filarial nematodes' sophisticated migration through their hosts. These parasitic worms infect hundreds of millions of people, causing diseases such as river blindness and lymphatic filariasis, which can lead to elephantiasis, severe swelling of the limbs.

The researchers identified two genes the nematodes use to respond to cues in their insect and mammal host environments. When the genes are disrupted, the worms are lost and less effective – a potential target for parasite treatment and control.



Broader Protection Against Influenza

Last winter, as Americans pulled up their sleeves for an annual flu vaccine, research led by **Marulasiddappa Suresh**, a professor of immunology, provided new insights into an alternative vaccine approach that provides broader protection against seasonal influenza.

The research describes a T-cell-based vaccine strategy effective against multiple strains of influenza virus. The experimental vaccine delivered long-lasting, multi-pronged protection in the lungs of mice by rallying T-cells. These specialist white blood cells quickly eliminate viral invaders through an immune response.

The findings suggest a potential strategy for developing a universal flu vaccine, "so you don't have to make a new vaccine every year," says Suresh. They also aid understanding of how to induce and maintain T-cell immunity in the respiratory tract, a knowledge gap that has constrained immunization strategies.

OTHER KEY DEVELOPMENTS:

Professor **David Vail** is part of research in collaboration with the UW School of Medicine and Public Health breaking new ground to make cancer cells more susceptible to attack by the body's immune system. The approach combines two techniques: targeted radionuclide therapy, which delivers a low dose of cell-weakening radiation specifically to cancer cells, followed by immunotherapy, which helps the immune system to recognize and destroy cancer cells.

Clinical assistant professor **Erin Lashnits** and colleagues found evidence of *Bartonella* infection in the blood of people with schizophrenia and schizoaffective disorder. *Bartonella* are flea-borne bacteria historically associated with cat-scratch disease. Researchers plan to proceed with a larger study to see whether the preliminary results are borne out. In additional work, Lashnits and colleagues evaluated the clinical accuracy of six diagnostic tests for *Bartonella* infection in dogs. They found the most commonly used tests had very low sensitivity, which can lead to false-negative results, while a less common test method was highly accurate.

Professor **Michael Cahill** led research that found for the first time that disruptions to a particular protein called Akt can lead to the brain changes characteristic of bipolar disorder. The results offer a foundation for research into treating the often-overlooked cognitive impairments of bipolar disorder and add to a growing understanding of how the brain's biochemistry affects health and disease.

Professor **Tony Goldberg**, doctoral student **Leah Owens**, and international colleagues revealed that an overlooked bacterial group, *Sarcina*, is linked to a mysterious illness dubbed epizootic neurologic and gastroenteric syndrome, or ENGS, in chimpanzees at the Tacugama Chimpanzee Sanctuary in Sierra Leone. The finding has helped veterinarians develop treatments for the disease.

Preston Cernek DVM'21 published research exploring a computer vision model to detect digital dermatitis in the hooves of dairy cattle. Digital dermatitis, linked to severe lameness, infertility, and decreased milk production, affects 90 percent of U.S. dairy herds. Early detection is challenging on farms; Cernek's model provides a new strategy for identifying cows in need of treatment.

FURTHERING THE WISCONSIN IDEA


BRYCE RICHTER

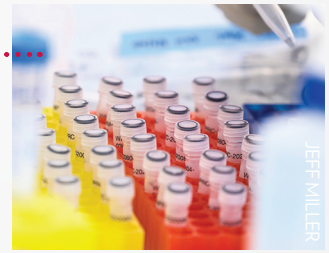
DEVELOPING a new method to test fish for signs of an invasive virus affecting the Great Lakes, with the findings providing a more accurate picture of the disease's impact on economically important sport fish.

CREATING an innovative digital game that transforms training in farm animal handling, helping trainees practice proper techniques in a simulated setting to improve cow handling, milk production, and farm personnel safety.


MEGHAN DEPISTO

ORGANIZING a Spay Day clinic at an area humane society to support the local community and combat pet overpopulation.

TEACHING nurses and personnel at more than 100 Dane County schools how to conduct rapid antigen testing for COVID-19 to help them react quickly to possible cases and prevent spread.


JEFF MILLER

These are just a few examples of the many ways UW School of Veterinary Medicine faculty, staff, and students served Wisconsin this year – delivering a solid return on the state's investment.


BRYCE RICHTER/UW-MADISON

By training veterinarians, conducting research that advances animal and human health, caring for patients, and providing service to the state and beyond, every day the school works to make lives better.

The Wisconsin Idea – the principle that education should influence people's lives beyond the boundaries of the classroom – guides this work.

Our outreach efforts also include offering timely insights to media and the public. This year, there was no topic timelier than the novel coronavirus and related vaccine education. School of Veterinary Medicine researchers spoke with outlets ranging from *The New York Times* to BBC News, Bloomberg to *Science*, and the Associated Press to *The Atlantic*. They also shared their perspective through numerous virtual town halls and discussions. All told, in 2020-21, the SVM and our faculty, staff, students, and alumni were cited in news outlets nearly 1,000 times.

Helping Animals and Those Who Care For Them

The UW School of Veterinary Medicine's Shelter Medicine program, directed by **Sandra Newbury DVM'03**, provides a needed resource for at-risk animals and those who care for them each day.

The program conducts its work through education and outreach-based research, supported through generous endowments and grants from **Jeff and Sara Wiesner**, **Margaret A. Cargill Philanthropies**, **Maddie's Fund**, and others.

Newbury and her team not only give shelters recommendations for improving animal welfare, but also foster a support network. The group provides veterinarians and staff the guidance they need to increase adoption rates and improve animal care, while helping them work within limits that set up both shelter animals and workers for success.

In June, **Ruthanne Chun DVM'91**, clinical professor of oncology, was named the 2021 recipient of the university's LaMarr Billups Community-University Engagement Award for her role in co-founding and helping to grow WisCARES. The award recognizes a member of the Greater Madison community who has made outstanding contributions to campus-community partnership initiatives.

It's a Zoo Out There

This year **Mary Thurber DVM'14** welcomed a new patient – **Bo**, a rambunctious two-year-old polar bear. Thurber is a clinical instructor of zoological medicine and serves as the primary veterinarian at Dane County's Henry Vilas Zoo. Since 2019, the School of Veterinary Medicine and its teaching hospital, UW Veterinary Care, have served as the contracted veterinary service for the zoo.

Thurber and other UW Veterinary Care Zoological Medicine clinicians and trainees visit Henry Vilas Zoo three days each week, in addition to on-call coverage. They work collaboratively with two veterinary technicians at the zoo, animal keepers, and zoo management to provide the highest possible level of animal care.

Various UW Veterinary Care specialty services also lend their expertise as needed. And for the first time this spring, the school began offering a zoological medicine clinical rotation for fourth-year doctor of veterinary medicine students that includes visits to the zoo.

Reflecting on the zoo's resident polar bears, Thurber says it's an honor to care for such an iconic but vulnerable species. "With climate change, it's easy to envision losing polar bears, which would be so devastating. Having the ability to care for the species under managed care is such a gift. They're a great ambassador for the general public and to help inspire the next generation."

Pandemic-Driven Demand

As a result of financial hardship caused by the pandemic, the **Wisconsin Companion Animal Resources, Education, and Social Services (WisCARES)** clinic has seen an increased number of new clients seeking veterinary care and support services over the past year.

WisCARES, considered a national model for community outreach and collaboration, is a partnership between the UW schools of veterinary medicine, social work, and pharmacy. It provides veterinary medical care and social services to individuals in Dane County who are low-income or experiencing or at risk of homelessness. Additionally, the clinic offers a pet food and supply pantry, animal foster care assistance, and boarding to qualifying clients.

According to a Pew Research Center study conducted in April 2020 related to the economic toll of the coronavirus pandemic, individuals with lower income have been the most affected by job loss or pay cuts because of COVID-19. During these trying times, the WisCARES team is committed to keeping families intact, building trusting relationships with clients, and providing resources and services to those in need.

ADVANCING THE SCHOOL


FLAD ARCHITECTS (2)

$11.9M
TOTAL NEW GIFTS AND PLEDGES (2020-21)

19.5%
% OF BUDGET FROM STATE SUPPORT IN 2021

2020 - 23%
2019 - 24%
2018 - 24%
2017 - 25%

Without gifts, the UW School of Veterinary Medicine would not have the resources to strategically invest in the people, research, and facilities that set the school and teaching hospital apart from our peers.

With the support of compassionate people, we can recruit and train the most outstanding faculty and students, make advances in research that benefit animals and people, provide diagnostic equipment that improves our treatment of disease and injury, and support scholarships that offset the debt load of our graduates.

Across the 2020-21 fiscal year, the school secured $11.9 million in new gifts and pledges. These contributions represent gifts of all sizes, all of which make a difference, from donors from all walks of life.

Through June 30, the school raised $136.2 million in UW-Madison's All Ways Forward comprehensive campaign, which launched in 2013. Funds raised through this campaign have supported the school's building expansion and allowed for investments in our faculty, research, and substantial new commitments to scholarship support for students. Critically, our campaign success includes $78.5 million in future estate gifts that have been documented, ensuring long-term investments in the school.

We share a gracious thank you with all who make a difference. Together, with your support, we are training the most outstanding students, providing the highest level of clinical care, and making discoveries that advance understanding of animal and human health.

A Future Made Possible

By the end of the 2021 fiscal year, the school had raised a cumulative $52 million toward the Animals Need Heroes Too building campaign – driving momentum as ground was broken in June on this long-anticipated expansion. This addition and renovation will allow the school to overcome severe space shortages and ensure we remain a global leader in training the next generation of veterinarians, serving animal patients, and making critical research discoveries that advance animal and human health.

Completion of the addition is projected for 2023 and renovations of the existing building in late 2024, making this an exciting phase in the school's history. We continue to raise the funds needed – with approximately $10 million left to go – to fully outfit the building with the specialized equipment required by complex clinical cases, research laboratories, and teaching spaces.

Forging History

As work begins on the school's building expansion, alumnus **John Hallett DVM'90** is forging ahead with a related project – Forward Together – a bronze sculpture depicting the educational journey of a veterinary medical student.

A veterinarian and artist, Hallett is donating his time and talent to the sculpture's creation. The piece is scheduled for completion in 2023 and will be located in a prominent courtyard between the current and new buildings. It aims to embody the spirit of education, research, and community at the UW School of Veterinary Medicine.

The project will also benefit from another generous offer. **Margo and Jack Edl**, long-time friends, clients, and donors to the school, have committed up to $100,000 to match all gifts directed to the new bronze sculpture. Because Hallett is donating his time, all gifts or pledges will directly support the physical costs of creation and installation.

"We made an impact as a group when we entered the new School of Veterinary Medicine in 1983 and we could come full circle if we could, again, make an impact as a class, for many years to come."

-BRADLEY POFF DVM'87

Supporting Students of Today and Tomorrow

Gifts have long driven substantial commitments to scholarship support for students, and this year the school was thrilled to launch several new opportunities to benefit students.

Two newly established gift funds will help bolster the school's efforts to create a more diverse and inclusive culture within the school and increase the representation of students from underrepresented populations. The School of Veterinary Medicine Diversity, Equity and Inclusion Fund supports the greatest needs in these areas, and the Veterinary Medicine Diversity, Equity and Inclusion Scholarship Endowment Fund supports students with financial need who aid in and support the School of Veterinary Medicine's diversity, equity and inclusion efforts. The latter was established through a generous lead gift from **Kristen Bernard**, a professor of virology in the School of Veterinary Medicine, and her husband **Rick Ezell**.

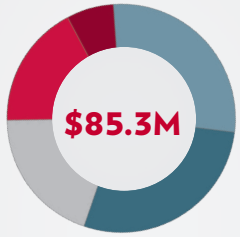
"We hope that by helping individuals, the scholarship will increase the diversity of the student body in veterinary medicine," says Bernard. "Diversity is so important to bring different backgrounds and ideas to solve problems facing our society and to better serve our clients and animal patients."

In addition, **Bradley Poff DVM'87** led a collective effort among peers from the Class of 1987 to establish the SVM Charter Class of 1987 Scholarship Fund. Poff sees the effort as an opportunity to recognize striving students and the school's legacy of caring. To date, 43 gifts have been received totaling $43,050 to endow the scholarship fund and provide student support in perpetuity. The class is hopeful their effort might inspire other groups of alumni to establish their own class scholarship funds.

Financials

EXPENDITURES BY SOURCE

(in millions)

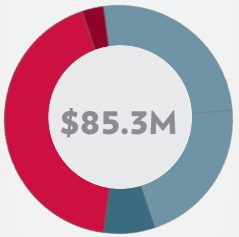


- Gifts **$5.8M**
- Grants **$24.0M**
- Program Revenue **$24.2M**
- Tuition **$14.7M**
- GPR* **$16.6M**

* State appropriations *(less estimated tuition and fees)*

EXPENDITURES BY PURPOSE

(in millions)



- Student Aid **$2.7M**
- Instruction **$40.0M**
- Other* **$6.3M**
- Research** **$36.3M**

* Student services, public service, and academic support

** Primarily research grants and contracts

AWARDS & HONORS HIGHLIGHTS (2020-21)

Each year, the school's students, faculty, and staff earn numerous accolades in a wide variety of fields, as exemplified in the list at right.

This is not a comprehensive list of awards and honors, only a representative sample from July 1, 2020 – June 30, 2021.

More at go.wisc.edu/svm-awards-honors.

AWARDS

Kristen Bernard
Fellow, American Academy of Microbiology

Starr Cameron
2021 Zoetis Distinguished Veterinary Teacher Award

Hannah Carey
2020 Theodore M. Brody Award, Michigan State University Department of Pharmacology and Toxicology

Ian Duncan
2020 Sir James Black Medal, Royal Society of Edinburgh

Thomas Friedrich
2021 Zoetis Award for Veterinary Research Excellence

Sathish Kumar
2020 Zoetis Distinguished Veterinary Teacher Award

Meghan Lepisto and Ashley Voss
2021 American Association of Veterinary Medical Colleges Communications Excellence Award

Mark Markel
Distinguished Fellow, National Academies of Practice in Veterinary Medicine

Daniel Radecki
Postdoc Excellence in Service Award, UW–Madison Postdoctoral Association

Mary Thurber DVM'14
2020 Society of Phi Zeta Research Manuscript Award

Lauren Trepanier
Walter F. Renk Distinguished Professor Award

David Vail
2020 Team Science Recognition Award, Society for Immunotherapy of Cancer

Chad Vezina
Vilas Faculty Mid-Career Investigator Award, UW–Madison

Jyoti Watters
2020 Zoetis Award for Veterinary Research Excellence

Tom Yuill PhD '64
Fellow, American Society for Tropical Medicine and Hygiene

LEADERSHIP ROLES

Marie Bucko DVM'21
President, Student American Veterinary Medical Association

Thomas Friedrich
National Institutes of Health Vaccines Against Microbial Diseases Study Section

Doug Kratt DVM'98
President, American Veterinary Medical Association

Mark Markel
President, American Association of Veterinary Medical Colleges

Gillian McLellan
National Institutes of Health Pathophysiology of Eye Disease Study Section

Michelle Turek
President-Elect, American College of Veterinary Radiology, Radiation Oncology subspecialty

THANK YOU TO OUR 2020-21 BOARD OF VISITORS

The Board of Visitors for the UW School of Veterinary Medicine serves as an external advisory body to the dean of the school. Members of the board have attained prominence in their respective careers and are chosen because of their value in providing sound advice and counsel to the dean.

Read more about the board members at vetmed.wisc.edu/board-of-visitors.

Tom Bach DVM'94*
Madison, Wisconsin

Nancy Ballsrud MBA'75
Minneapolis, Minnesota

John Baumann '82
Monroe, Wisconsin

Debbie Cervenka
Santa Rosa Beach, Florida

Terrence Clark DVM'87*
Cottage Grove, Wisconsin

Margo Edl
Middleton, Wisconsin

Patrick S. Farrell MS'83, DVM'87*
Russell, Pennsylvania

Charity Gottfredsen '02, MS'07, DVM'07*
Chicago, Illinois

Dan Grimm
Waterford, Wisconsin

Melita F. Grunow
Lake Geneva, Wisconsin

Peter Hanson MS'94, PhD'97*
Boston, Massachusetts

Phil Jennings JD'93
Madison, Wisconsin

Diane Larsen '80, DVM'90, PhD'99*
Duluth, Georgia

Steve Larson MS'70
Fort Atkinson, Wisconsin

Jeffry A. Neuenschwander '82
Detroit, Michigan

Esther Olson
Belleville, Wisconsin

Jill Pelisek
Milwaukee, Wisconsin

Janet Raddatz
Plymouth, Wisconsin

John Schaefer '81
Harshaw, Wisconsin

Karl Solverson '94, DVM'99*
Westby, Wisconsin

Thomas Torhorst '65
Racine, Wisconsin

Karen Walsh '81, MA'89
Madison, Wisconsin

All degrees listed are earned from UW-Madison.
* Indicates alumni of the UW School of Veterinary Medicine.

OUR THANKS TO THE SVM ALUMNI ADVISORY BOARD

The Alumni Advisory Board enhances the school's support of and relationship with alumni by providing input on alumni-related activities and communications and the best ways to keep alumni connected.

Monica Bender DVM'91

Holly Hovanec DVM'18

Diane Larsen DVM'90, PhD'99

Jennifer Lorenz DVM'09

Debra Olbrich DVM'07

Brad Poff DVM'87

Kathy Reilly DVM'90

Ann Sherwood Zieser DVM'90

Ty Vannieuwenhoven DVM'89

Oncology resident **Rachel McMahon DVM'19** examines **Chester**, a beagle mix who participated in a clinical trial funded by the Department of Veterans Affairs to evaluate a novel immunotherapy in dogs with melanoma. A common skin cancer in humans, malignant melanoma is particularly prevalent in veterans, especially those who served in the Middle East. This is because in people, melanoma is triggered by sun exposure. In dogs, the disease emerges as a common oral cancer. The VA-funded canine clinical trials at UW Veterinary Care are running in tandem with a related study of the same investigational treatment in human melanoma patients.

We thank the generous donors who provided funding for the production of this publication.

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