



Quarter 1 & 2 School Report: January – June 2023

Goal 1: Educating World Leaders

1.1. *Promote Faculty and Staff Engagement in Career Development Programs and Best Practices for Educators*

Veterinary Molecular Biosciences (VMB)

- Pamela Lein was selected as a recipient of the 2023 Citation of Excellence for Faculty & Staff Partnership, awarded by the UC Davis Staff Assembly <https://staff.ucdavis.edu/article/2023-citations-excellence-and-scholarship-recipients>, for the development of the Graduate Mentoring Initiative (GMI) within the UC Davis Office of Graduate Studies (<https://grad.ucdavis.edu/graduate-mentoring-initiative-gmi>). The GMI promotes best practices in mentoring for faculty.
- Ashley Carr received a 2023 UC Davis Staff Assembly Scholarship <https://staff.ucdavis.edu/article/2023-citations-excellence-and-scholarship-recipients>.

The Western Institute for Food Safety and Security (WIFSS)

USDA NADPRP Grant:

- Instructional Systems Designer (ISD), Heather Johnson, of WIFSS led a team of subject matter experts (Dr. Michael Payne, Dr. Bennie Osburn, and David Goldenberg), the WIFSS Graphic Designer and Web Developer, Richard Thompson, and community college faculty (Brandi Asmus, Woodland College, Dr. Candice Stafford-Banks, Woodland College, and Jessica Cardoso, San Joaquin Delta College) in the development of new teaching materials for college students on on-farm enhanced biosecurity.
- Completed year one of a two-year collaborative, grant funded project with Woodland Community College and San Joaquin Delta College to develop teaching materials/modules on on-farm enhanced biosecurity practices that align with the California and USDA Secure Food Supply (SFS) programs.
- Developed updated course materials for community colleges and are making them available to be downloaded through Canvas.
- Solidified a good working relationship between subject matter experts and instructional designers at WIFSS and college instructors at California community colleges.
- The result of our efforts will ensure that college students develop skills in evaluating farm premises for biosecurity vulnerabilities, along with problem-solving skills to formulation possible mitigation

strategies to help protect farms from contamination by foreign animal diseases (FAD) and ensure continuity of business during an outbreak.

- New teaching materials include lesson plans and learning objectives, slideshow presentations files, voiced-over recordings of the slideshow presentations, student learning activities, student discussion prompts, and learning assessments (quizzes and/or rubrics for grading assignments).
- All materials are being made copyright and section 508 compliant.
- WIFSS will be seeking additional funding to continue work with the colleges and expand the reach of this project's deliverables.
- For more information on the project: <https://www.wifss.ucdavis.edu/nadprp-22-24/>

VMTH Highlights

1.1

The British Small Animal Veterinary Association recognized Dr. Philipp Mayhew is the 2023 recipient of The Simon Award.

<https://www.vetmed.ucdavis.edu/news/dr-philipp-mayhew-wins-british-veterinary-award>

1.1

Dr. Boaz Arzi becomes the first veterinarian accepted as an affiliate member to the American Society of Temporomandibular Joint Surgeons.

<https://www.vetmed.ucdavis.edu/index.php/news/dr-boaz-arzi-becomes-first-veterinarian-member-american-society-tmj-surgeons>

1.1, 2.2

Equine surgery resident Dr. Tom Bergstrom was awarded the 2023 American Association of Veterinary Clinicians Resident Achievement Award.

<https://www.vetmed.ucdavis.edu/index.php/news/uc-davis-equine-surgery-resident-wins-national-award>

1.1

Dr. Catherine Outerbridge has been awarded the 2023 American Academy of Veterinary Dermatology's Kral Award.

<https://www.vetmed.ucdavis.edu/news/dermatologist-dr-catherine-outerbridge-wins-national-award>

1.1

Dr. Kate Hopper was recently awarded the 2023 Zaslow Distinguished Service Award from the Veterinary Emergency and Critical Care Society.

<https://www.vetmed.ucdavis.edu/news/dr-kate-hopper-wins-prestigious-emergencycritical-care-award>

1.1

The UC Davis veterinary hospital acknowledged the dedication and hard work of its staff members with the annual Staff Awards and Rachel Smith Award.

<https://www.vetmed.ucdavis.edu/news/uc-davis-veterinary-hospital-celebrates-staff-annual-awards-1>

1.1

Dr. Boaz Arzi was recognized for his multifaceted research which focuses on feline chronic gingivostomatitis, maxillofacial fracture management, temporomandibular joint disorders, and regenerative medicine with the 2023 AVMF/EveryCat Health Foundation Research Award.

<https://www.vetmed.ucdavis.edu/news/dr-boaz-arzi-named-recipient-2023-avmfeverycat-health-foundation-research-award>

1.1, 2.2

Dr. Ching Ching Shirley Kot was named the recipient of the 2023 Outstanding AJVR Resident Manuscript Award.

<https://www.vetmed.ucdavis.edu/news/dentistry-resident-receives-national-research-award>

1.2. Promote Dynamic, Up-to-Date Curriculum and Training Programs to Foster Educational Goals and Career Opportunities

1.2

The UC Davis veterinary hospital hosted the 44th annual Gerald V. Ling Veterinary Intern and Resident Research Symposium.

<https://www.vetmed.ucdavis.edu/news/hospital-hosts-2023-veterinary-intern-and-resident-research-day>

1.3. Establish and Maintain Programs and Strategies that Promote a Diversified Professional Community

EpiCenter for Disease Dynamics

- Christine K. Johnson visited Laos and Singapore as US Science Envoy
- Christine K. Johnson visited Costa Rica and Peru as US Science Envoy
- Two students completed the pilot Pathways to One Health Undergraduate Fellowship, which seeks to increase inclusion and retention of students from underrepresented groups and support their pursuit of advanced degree programs in One Health Sciences

Admissions and Student Programs

- Amanda Steidlmayer was certified as a Gallup Strengths coach and will offer strength based training in Prologue and individual coaching to DVM students.
- Monae Roberts started as the Chief Diversity Officer.
- The CLaW office hosted CVMA officers who gave a presentation on “Issues to Consider when Transitioning from the Academic to Professional Settings.”
- The CLaW office hosted a talk by Dr. Zach Ward on “Setting Boundaries for Mental Wellness.”
- The CLaW office hosted a talk by our new psychologist Dr. Vanessa Wu, who spoke about emotional regulation and “The Happiness Trap.”
- The CLaW office hosted a talk by UCD SVM alumna, Dr. Dani Rabwin on “How to be a Good Mentee.”
- The CLaW office hosted a talk by Amanda Steidlmayer on “Keeping Your Resolutions.”
- The CLaW office hosted a talk by Amanda Steidlmayer on “Intentional Interviewing.”
- In collaboration with the Health and Wellness Club, the CLaW office hosted Wellness Week.
- Diversity Week was offered as a collaboration between Monae, VOICE, the CLaW office and other student groups.

- CVMA hosted the Class of 2023 Senior Banquet.
- Faculty voted to change the admissions selection process with the goal of increasing the diversity of the applicant pool and optimizing the selection process.
- The Admissions staff offered admissions information sessions to more than twenty pre-vet clubs across the US, Puerto Rico and Canada.

1.4. Implement Multiple Strategies to Reduce Educational Debt for Professional Degree and Graduate Students

Admissions and Student Programs

- Tina Maher coordinated the offering of \$1.7M in scholarships to DVM students that will be awarded in academic year 2023-2024.
- Amanda Steidlmayer coordinated mock interview labs for DVM students in VET440.
- Jim Clark and Erik Olstad coordinated mock salary negotiation labs for DVM students in VET440.

Office of Advancement

Jan-Mar 2023

- The Office of Advancement closed a \$600K bequest to establish a new endowed scholarship to support DVM students.

Apr-Jun 2023

- The Office of Advancement closed a \$2M bequest expectancy to establish a new endowed scholarship to support DVM students.

Goal 2: LEAD IN INNOVATION AND HIGH IMPACT TRANSDISCIPLINARY RESEARCH TO ADVANCE THE HEALTH OF ANIMALS, PEOPLE, AND THE ENVIRONMENT

One Health Institute (OHI)

California Raptor Center (CRC)

Faculty from CRC and Dept. of Aerospace Science and Engineering are working together and taking a bio-informed approach to identifying beneficial attributes of bird flight that can be further optimized for implementation on engineered systems, specifically uncrewed aerial vehicles.

Veterinary Genetics Laboratory (VGL)

The following updates refer to Goals 2 and/or 4

- 1) VGL faculty, staff, and students attended the [Plant & Animal Genome Conference](#) held January 13-18 in San Diego, promoting and sharing advances in animal genetics.
 - **Dr. Felipe Avila** was the co-organizer and chair of two workshops: the Horse Genome and Alpaca Genome workshops.
 - **Dr. Rebecca Bellone** gave two talks in the Horse Genome Workshop describing research advances in equine genetics: "A De Novo 2.3 kb deletion in MITF Explains a Novel Splashed White Phenotype in Thoroughbreds" and "Update on the development of an ISAG equine parentage testing SNP Panel." The latter referred to a large international collaboration being led by Dr. Bellone with participation of many VGL staff members.
 - **Dr. Bradley Till** gave a talk in the Thermo Fisher Industry workshop assessing the effectiveness of the Ion Torrent S5 amplicon sequencing system for animal genetic testing: "Evaluation of the AgriSeq Custom Equine Panel for Genotyping and Discovery Science and the Canine Traits and Disorders Panel for diagnostic testing".

- 2) The VGL was invited to participate in this year's [American Quarter Horse Association \(AQHA\)](#) Convention held in Fort Worth, Texas in February. **Drs. Rebecca Bellone and Liza Gershony** attended the convention and spoke to AQHA members about the use of genetic testing to promote health, breed integrity and wellbeing of American Quarter Horses. Together they developed an activity to explain how coat color genetics works in the horse using Dr. Bellone's great analogy: "it's as simple as a cup of coffee!" Attendees were excited about the activity and the "aha" moment it provided as they connected that knowledge to past breeding experiences they had with their horses. Dr. Bellone also served in an advisory role to the Studbook and Registration Committee and serves as an appointed member of the AQHA Research Committee.
- 3) VGL staff attended the [International Society for Animal Genetics \(ISAG\)](#) meeting that took place in July in Cape Town, Africa. ISAG is a professional society that organizes conferences and workshops, as well as comparison tests, to support and promote the exchange of ideas, development of guidelines, and building of international collaborations with the goal of improving the quality and accuracy of genetic testing for animals. The organization holds comparison tests every two years and member institutions are invited to participate. When you participate in the comparison tests your results get ranked based on concordance across the markers and samples provided. This year VGL was selected as the duty laboratory for both horses and cats. Duty labs are responsible for identifying animals to be tested, isolating DNA to send to participating laboratories all over the world, and reviewing and presenting the compilation of results at the conference. The VGL always participates in parentage testing comparisons for various species (horses, donkeys, dogs, cats, cattle, sheep, goats, pigs, camels, and alpacas/llamas), and has always achieved the highest ranking of #1, which corresponds to a 98-100% testing accuracy.
 - **Dr. Rob Grahn** served as the chair of the Cat Genetics Workshop and presented the results for comparison testing in cats.
 - **Leslie Bickel** was chair of the Horse Genetics and Genomics workshop, and organized the workshop, selecting speakers, and moderated the session.
 - During the Equine Genetics and Thoroughbred Parentage Testing Workshop, **Dr. Rebecca Bellone** presented results for the equine STR comparison tests and gave an invited talk entitled "Development of a Robust Across Breed Equine Parentage SNP Panel for ISAG Approval", where she provided the results of the international collaborative study she is leading to develop a single nucleotide polymorphism (SNP) panel that can be used for parentage testing in the horse. This study involved researchers from all over the world as well as many of our team at the VGL. At this year's meeting, the panel suggested by Dr. Bellone and colleagues was approved as the official ISAG horse SNP panel. In two years, there will be an unofficial comparison test performed using this panel. The goal is to eventually transition into using SNPs instead of microsatellites for parentage testing in horses.
- 4) VGL staff and faculty have contributed six new scientific publications during the first semester of 2023.
 - The first publication described two very rare case reports of delayed embryo development in two donor mares: one Quarter Horse and one Arabian. VGL's parentage testing confirmed this rare event in one of the horses in the study.
 - The [second publication](#) is the result of the Functional Annotation of the Animal Genomes (FAANG) project, an international collaboration in which **Dr. Rebecca Bellone** has been heavily involved. The project collected various equine tissues and generated functional annotation data following similar methodologies created by the human Encyclopedia of DNA Elements (ENCODE) project. The lead

author on this study was Dr. Sichong Peng, a former recipient of the UC Davis VGL Ann Bowling Fellowship who was mentored by Dr. Carrie Finno, Gregory L. Ferraro Endowed Director of the UC Davis Center for Equine Health (CEH).

- **Dr. Ben Sacks** collaborated on a study that combined 12 years of data collection to develop a [population density and distribution model](#) for the endangered Sierra Nevada Red Fox. The results of the study will serve as a baseline for the development and evaluation of future conservation and management efforts.
 - **Drs. Ben Sacks** and **Mark Statham** collaborated on [a project that surveyed salt marsh harvest mice](#) using a non-invasive genetic technique and concluded that their patterns of patch occupancy were consistent with the area-isolation paradigm, which predicts that "larger and more connected patches have a higher probability of occupancy". The data collected suggest that the selection of well-connected restoration sites may be more beneficial than selecting larger but isolated sites for salt marsh harvest mouse habitat conservation.
 - **Dr. Rob Grahn** collaborated on two studies assessing pre-implantation genetic testing (PGD) of equine embryos. The [first study](#) genetically surveyed 91 *in vitro*-produced horse embryos and concluded that the efficacy of PGD for disease-causing genes in such embryos can be improved by a second biopsy and refreezing of the embryo while exhibiting no detrimental effect to posterior *in vivo* embryo development. The [second study](#) assessed different methods for PGD on equine embryos and showed that equine embryos can be safely subjected to two biopsy procedures without apparent detrimental effects to embryonic size. The study also showed that blastocle fluid aspiration may be a potential alternative to trophoblast cell biopsy for *in vivo*-produced embryos, whereas the accuracy of PGD from blastocle fluid aspiration of *in vitro*-produced embryos is too low. The abstracts for these studies were presented at the 13th International Symposium on Equine Reproduction held July 10-14 in Brazil.
- 5) **Dr. Stefanie Oppenheim** gave an invited talk to the [Texas Mini Milksters](#) members on the importance of DNA testing in goats. This 2-part series titled "DNA testing in Goats – How and why we do it" was held via Zoom on June 22 and June 29 with the purpose of helping dairy goat breeders better understand genetic testing and how it can be used to improve their herds. Part 1 focused on parentage testing and analysis, while part 2 discussed the available goat diagnostic tests: Freemartin testing, Scrapie susceptibility, G6S, and Alpha Casein.
 - 6) **Dr. Rob Grahn** gave an invited presentation to the [California Rural Crime Prevention Task Force](#) on May 1-3 at Lake Tahoe, CA. The 1.5-hour presentation covered the different types of evidence that VGL can use in forensic analyses, and the power of the evidence we can provide for evidentiary purposes. Dr. Grahn also presented example cases that highlighted VGL's Forensic testing processes.
 - 7) VGL hosted three groups of middle and high school students in the first semester of 2023. The first was a group of seniors from the Sacramento Academic and Vocational Academy (SAVA) who were participating in a job shadow event. **Drs. Rebecca Bellone and Liza Gershony** guided students through a tour of the VGL and offered them the opportunity to extract their own DNA from cheek cells. Students learned about the applications of genetic testing in animal health and well-being and were able to see how testing is performed. The second and third groups of students consisted of 7th and 8th graders from Wildflower School in Chico, CA and Sierra Expeditionary Learning School in

Truckee, CA. Students were given a tour of the VGL and an opportunity to learn how genetic testing can help determine animal parentage.

California National Primate Research Center (CNPRC)

- In May 2023, the California National Primate Research Center was awarded a five-year renewal of the NIH center grant P51 OD0111107. This is the sixty second year of funding for the Center and the second successful renewal under the leadership of Director John Morrison (UC Davis SOM). The P51 application received an overall impact score of 19 with a total award (including supplements and indirects) of over \$60 million. There are currently eight SVM faculty with California National Primate Research Center Core Scientist appointments.
- California National Primate Research Center Core Scientist and SVM faculty Brenda McCowan (PHR) led an international study using social network analysis to investigate the potential impact of social interactions between humans and wild macaque monkeys in Asia on vulnerability to zoonanthropotic outbreaks. Their findings have important global implications for infectious disease transmission at human-wildlife interfaces.

Impact of joint interactions with humans and social interactions with conspecifics on the risk of zoonanthropotic outbreaks among wildlife populations.

Balasubramaniam KN, Aiempichitkijarn N, Kaburu SS, Marty PR, Beisner BA, Bliss-Moreau E, Arlet ME, Atwill E, and McCowan B. Sci Rep 2022 Jul 8;12(1):11600.

- A collaborative team led by UC Davis SOM ophthalmologist Glenn Yiu along with SVM faculty California National Primate Research Center Associate Director of Primate Services Jeff Roberts (VME) and Core Scientist Sara Thomasy (VSR) reported a spontaneous nonhuman primate model of spontaneous myopic foveoschisis. This phenotype was initially identified in a CNPRC rhesus macaque monkey by behavioral care staff, who noted the animal exhibited visual behaviors of myopia.

A Spontaneous Nonhuman Primate Model of Myopic Foveoschisis.

Sin T-N, Kim S, Li Y, Wang J, Chen R, Chung SH, Kim S, Casanova MI, Park S, Smit-McBride Z, Sun N, Pomerantz O, Roberts JA, Guan B, Hufnagel RB, Moshiri A, Thomasy SM, Sieving PA, and Yiu G. Invest Ophthalmol Vis Sci 2023; 64(1):18.

Pacific Southwest Center of Excellence in Vector-Borne Diseases (PacVec)

- The Pacific Southwest Center of Excellence in Vector-Borne Diseases (PacVec) hosted its annual meeting on April 6th and 7th, 2023 in Davis, CA. This meeting brought together 108 trainees, staff, and faculty from academic institutions, public health, and vector control agencies to present and discuss research and surveillance and to find more ways to continue to strengthen the



ties between researchers and public-health professionals.

- PacVec co-hosted the 2023 annual meeting of the Tick-Borne Disease Working Group, in partnership with the California Department of Public Health. This year’s meeting was organized as an in-person session on March 7th by Dr. Janet Foley and PacVec Coordinator Celia Chen, along with CDPH colleagues. Participants presented updates on research and surveillance from academic and public-health partners studying ticks and tick-borne diseases throughout California.
- PacVec awarded 11 training grants to 11 students at nine institutions in the Pacific Southwest region which includes UC Riverside, UC Irvine, UC Santa Barbara, CSU San Bernardino, Utah State University, University of Arizona, Arizona State University, University of Hawaii at Manoa, and the Pacific Academic Institute for Research in Palau. Training grants are intended to (1) increase opportunities for hands-on learning and awareness of careers in public-health entomology as a complement to existing curriculum content at colleges and universities in the Pacific Southwest and (2) provide career development opportunities for individuals interested in public-health-relevant research on vector-borne diseases and to enable additional research and training opportunities that will contribute to development of the public-health workforce.

Office of Research and Graduate Education

- Dr. Danika Bannasch started as Associate Dean of Research and Graduate Education on March 1, 2023.
- Dr. Issac Pessah stepped down and we thank him for his exceptional service to the school.
- The Graduate Student Support Program received 28 applications and 13 students were awarded funding to begin fall 2023-2024. The REACH program had one application and it was funded.
- The STAR (Students training in advanced research) program received 47 applications and 35 students were awarded funding for summer 2023. We also have 3 additional STAR student participating through BIVSP and grant funding.
- The RAC (reaching across the causeway) awards had 28 applications and four were awarded.
- External site visit by the VSTP advisory board
- Monthly AAVMC Research Deans meeting to discuss/share ideas on research at Veterinary schools and colleges.
- Monthly meetings with ACCD (Administrative Coordinating Council of Deans) which coordinates graduate student funding training grant matching funds.
- Met with all graduate group chairs and coordinators
- Met with all department chairs and departments
- Participated in VORL strategy and leadership recruitment

RESEARCH AWARD TOTALS

First Quarter: 205 actions for 95 faculty (broken down below). Of these actions, 65 were new awards; the remainder were non-competing renewals, no-cost extensions and amendments.

| | Actions | Faculty | New* |
|----------|-----------|----------|----------|
| January | 59 | 34 | 26 |
| February | 62 | 31 | 16 |
| March | 93 | 30 | 23 |
| | <hr/> 205 | <hr/> 95 | <hr/> 65 |

*remaining are non-competing renewals, no cost extensions and amendments

Second Quarter: 212 actions for 81 faculty (broken down below). Of these actions, 18 were new awards; the remainder were non-competing renewals, no-cost extensions and amendments.

| | Actions | Faculty | New* |
|-------|------------|-----------|-----------|
| April | 61 | 26 | 18 |
| May | 89 | 25 | 28 |
| June | 62 | 30 | 21 |
| | <u>212</u> | <u>81</u> | <u>67</u> |

*remaining are non-competing renewals, no cost extensions and amendments

There were five projects over \$1M:

| Month | Name | Department | Sponsor | Project Title | Total |
|---------------|---------------------|---------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------|-------------|
| February 2023 | Roberts, Jeffrey | Vm: Medicine & Epidemiology, Primate Center | NIH National Institutes of Health Office of the Director | Production of Pedigreed SPF Rhesus Macaques | \$1,030,214 |
| May 2023 | Smith, Woutrina | Vm: Medicine & Epidemiology, One Health Institute | United States Agency for International Development (USAID) | One Health Workforce: Next Generation | \$1,000,000 |
| June 2023 | Smith, Woutrina | Vm: Medicine & Epidemiology, One Health Institute | United States Agency for International Development (USAID) | One Health Workforce: Next Generation | \$1,605,000 |
| June 2023 | Johnson, Christine | Vm: Wildlife Health Center, One Health Institute | NIH National Institute of Allergy and Infectious Diseases (NIAID) | EpiCenter for Emerging Infectious Disease Intelligence | \$1,555,321 |
| June 2023 | Barker, Christopher | Vm: Pathology, Micro, & Immun | DHHS Centers for Disease Control and Prevention (CDC) | Pacific Southwest Regional Center of Excellence in Vector-Borne Diseases | \$2,000,000 |

Strategy 2.1. Promote Innovative Multi-Disciplinary Collaborations to Address Societal Needs

Center for Food Animal Health (CFAH)

On February 22, 2023 the CFAH held its annual Stakeholder Workgroup Advisory Meeting that brought together SVM's AES (Agricultural Experiment Station) and Vet Med Extension faculty and California Stakeholders representing a variety of agricultural industries including beef, dairy, small ruminant, aquaculture, and poultry. Faculty provided updates on funded research activities from FY '20-'21 and '21-'22. Stakeholders and faculty discussed and updated CFAH funding priorities for '23-'24 (see: <https://cfah.vetmed.ucdavis.edu/resources/priority-issues>).

Veterinary Center for Clinical Trails (VCCT)

2023, Quarter 1

Veterinary Center for Clinical Trials completed enrollment for a study evaluating the efficacy of two different oral anti-viral drugs for the treatment of effusive Feline Infectious Peritonitis (“wet” FIP). This is a randomized, double-blinded study led by Dr. Krystle Reagan, Dr. Brian Murphy, and Dr. Emma Cosaro and is comparing Remdesivir, an FDA approved anti-viral drug, to GS-441524, a similar anti-viral drug which has been shown in previous clinical trials to be safe and efficacious in treating cats with naturally occurring FIP; however, this drug is not readily available in the US.

2023, Quarter 2

Veterinary Center for Clinical Trials completed enrolling patients in a study for dogs with advanced cancer, specifically metastatic oral melanoma or osteosarcoma. This trial, led by Dr. Rob Rebhun, uses the combination of Doxorubicin chemotherapy and inhaled IL-15 immunotherapy to treat these cancers once they have metastasized to the lungs. This trial is evaluating the safety and efficacy of this treatment combination, and the information gathered from this trial may improve the outcomes of dogs with metastatic cancer.

Veterinary Medicine Teaching and Research Center (VMTRC)

Heidi Rossow completed a year of leadership service as President of the American Registry of Professional Animal Scientists (ARPAS)

Strategy 2.2. Enhance Research Training and Experiential Opportunities for Clinician-Scientists, Residents, Veterinary Students, and Graduate Students

Veterinary Medicine Teaching and Research Center (VMTRC)

- Martin Breen, Dairy Production Medicine Resident, was awarded 3rd place in the 2023 American Dairy Science Association (ADSA) Production Division Graduate Student Oral Competition – MS, for his presentation, ‘Effect of group housing of preweaned dairy calves on antimicrobial resistance and health outcomes.’
- Ashley Niesen, PhD student in the Animal Biology Graduate Group, was the 2023 California Animal Nutrition Conference (CANC) scholarship winner and gave her presentation on, ‘The effects of stage of lactation and mastitis on peripheral blood mononuclear cell mitochondrial enzyme activity on five California dairies.’
- Pdraig Lucey, PhD student in the Animal Biology Graduate Group, was awarded first place in the 2023 CANC poster competition for his project, ‘Predicting dairy pen dry matter intake distribution shape with machine learning.’
- Logan Widmer, MS student in the Animal Biology Graduate Group, was awarded second place in the 2023 CANC poster competition for his project, ‘The effects of probiotic supplementation on the prevention of diarrhea in pre-wean Holstein dairy calves.’

One Health Institute (OHI)

One Health Workforce-Next Generation

Key Accomplishments:

- The [USAID One Health Workforce – Next Generation Project](#) led by Dr. Woutrina Smith and the One Health Institute, has had over 4000 enrollments from across 85 countries in free online courses on the [One Health Workforce Academy](#) over the past year. In spring 2023, 10 new courses were rolled out, covering topics including antimicrobial resistance, risk communication and community engagement, fundamentals of One Health, and gender and One Health.
- The One Health Workforce Academies, part of the One Health Workforce - Next Generation project led by the One Health Institute, is a virtual university featuring 11 online courses, 15 case studies, and 38 unique training materials designed to help learners build One Health knowledge and skills required by the modern workforce. To date, there are >2,900 registered learners from 85 countries and >4,500 course enrollments. Get involved and learn more at: <https://onehealthworkforceacademies.org/>

Office of Advancement

Jan-Mar 2023

- Strategy 2.2: The Office of Advancement closed a \$2.3M pledge to support house officers.

Office for Global Programs

UC Davis visit to Chile:

A delegation from the University of California, Davis with representatives from across the university visited Santiago, Chile in January 2023. University leadership, government officials, and industry representatives discussed One Health approaches to agriculture, health, climate, sustainability, human rights, and many other areas. These discussions led to a new [faculty seed grant program](#) that is open for new proposals to be submitted through July 31, 2023. *(Picture 1)*

Record number of SVM students awarded Global Programs Funding:

This year 33 SVM students were awarded funding to conduct globally engaged projects in the following countries: South Africa, China, India, Italy, Japan, South Korea, Italy, Guatemala, New Zealand, Rwanda, Costa Rica, Argentina, Australia, Netherlands, Hong Kong, Taiwan, Germany, Namibia, and Uganda. Of the students awarded in 2023, 29 students received International Summer Externships support to work on their projects, five received Global Feline Health Fellowship, and three received Global Underserved Community funding. Students awarded funding will present at **Global Programs Film Festival on September 14th, 2023.** *(Picture 2 & 3 at the end)*



Photo 1. *UC Davis - Chile Delegation*



Photo 2. *SVM student, April Yoshihara, at a field site during her summer project in Mexico.*



Photo 3. *SVM student, Asiya Bhaisaheb, collecting samples in free-roaming dogs to determine mange prevalence in Vadodara region in India.*

Center for Companion Animal Health (CAAH)

The CCAH provided \$50,941 in funding to support nine resident, fellow, graduate student and STAR research studies.

The 2023-2024 calls for [CAAH resident research proposals](#) was announced. Deadlines:

- October 30, 2023
- February 5, 2024
- May 6, 2024
- July 29, 2024

A CCAH funded study resulted in the 2023 Outstanding AJVR Resident Manuscript Award:

- Dr. Kot was selected for her co-authoring of the manuscript "[Biomechanical evaluation of locking vs. non-locking 2.0-mm malleable L-miniplate fixation of simulated caudal mandibular fractures in cats.](#)" Joining her on the publication were SVM faculty members Drs. Frank Verstraete, Susan Stover, and co-author Boaz Arzi, as well as research engineer Tanya Garcia.

Three CCAH resident research studies resulted in publications.

Strategy 2.3. Enhance Shared Resources that Support Clinical, Basic, and Translational Science

Center for Companion Animal Health (CCAH)

CCAH provided research, equipment and publication support to faculty:

- 11 faculty research grants - \$303,802
- 5 faculty match research grants - \$37,500
- 3 donor directed faculty grants - \$45,210
- 20 faculty research equipment grants - \$306,034
- 20 faculty publications costs - \$11,130

Twelve CCAH faculty research studies resulted in publications.

To improve the health and well-being of companion animals through academic studies and clinical research the CCAH approved 20 faculty grants from its annual call. \$300,083 was awarded to support research in the areas of Anesthesia, Cancer, Cardiology, Dental, Infectious Diseases, Genetics, Pathology.

[Special one-time faculty](#) call for proposals was announced:

- One-time competitive grant for up to \$50,000 for faculty who are interested in companion animal wound healing/care and/or pain management research.
- Deadline: October 30, 2023

Veterinary Medicine Teaching and Research Center (VMTRC)

Tactics:

- Promote use of existing school and campus animal resources, funding, shared resources, common equipment and other infrastructural support

Due to the impacts of atmospheric river storms this winter in the Central Valley and the subsequent flooding of the CAHFS Ardans Lab, the VMTRC is sharing office, administrative, laboratory and research spaces and facilities with the Tulare CAHFS personnel in support of continuity of operations for mission critical diagnostic activities and client services until the CAHFS Ardans Lab facilities can be restored.

VMTH Highlights

2.3

The Veterinary Center for Clinical Trials welcomes Drs. Krystle Reagan and Robert Rebhun as new co-directors of the center.

<https://www.vetmed.ucdavis.edu/news/new-clinical-trials-leadership-uc-davis>

2.3, 3.2, 3.3

UC Davis veterinary scientists recently published a study to help better describe the eye disease symblepharon and its potential treatments.

<https://www.vetmed.ucdavis.edu/news/study-shows-complexity-and-treatability-eye-disease-kittens>

2.3, 2.4

The USAF 60th Dental Squadron and the Dentistry and Oral Surgery Service joined forces to advance dental care for some of the unsung heroes of the military, the military working dogs.

<https://www.vetmed.ucdavis.edu/news/unique-partnership-military-working-dogs>

Strategy 2.4. Promote Impact of School's Research to Enhance Recognition and Influence Policy and Stakeholder Engagement

VMTH Highlights

2.4, 4.1

The Large Animal Clinic at the UC Davis veterinary hospital served as the on-site veterinary team during last week's Red Bluff Round-Up Rodeo.

<https://www.vetmed.ucdavis.edu/index.php/news/uc-davis-provides-veterinary-care-102nd-red-bluff-round>

Veterinary Medicine Teaching and Research Center (VMTRC)

Tactics:

- Provide experts and evidence-based outcomes on issues of importance to legislators and constituents, government agencies and all stakeholders

This spring Terry Lehenbauer joined with Alison Van Eenennaam, UCD Extension Specialist – Animal Biotechnology and Genomics, to give podcasts, interviews, and zoom presentations about the approved uses and benefits of mRNA vaccine technology for livestock to different audiences and stakeholder groups, including the Missouri Farm Bureau Federation State Resolutions Committee.

Terry Lehenbauer, through his membership on the American Association of Bovine Practitioners (AABP) Committee on Biologics and Pharmaceuticals, co-authored the July 2023 AABP Cattle Vaccine position statement.

http://www.aabp.org/about/Guidelines_PositionStatements.asp

Office of Advancement

Apr-Jun 2023

- The Office of Advancement closed a \$1M bequest expectancy to establish a new endowment to support feline research and a \$2M bequest expectancy to establish a new endowment to support canine research.

Goal 3 - Provide Cutting-Edge Clinical Programs

Strategy 3.1. Enhance the Veterinary Medical Center (VMC) Services to Promote an Unmatched, Compassionate Patient Care and Client Experience

UC Veterinary Medical Center San Diego (UCVMCSD)

The new San Diego specialty clinic will not only focus on delivering unmatched veterinary care services to the regions clientele that will include the referring veterinary community, but will also focus on delivering 5-star service to our clients during the entirety of their experience. Our design concept of new facility will play an integral role in helping to facilitate this one of a kind experience.

VMTH Highlights

3.1, 3.2, 3.3, 3.4

The VMTH expanded its clinical space, including the opening of a new Emergency Room and Intensive Care Unit.

<https://www.vetmed.ucdavis.edu/news/nations-no-1-veterinary-school-open-new-ericu>

Strategy 3.2. Support Veterinary Medical Center (VMC) Programs that Promote a Culture of Collaboration, Excellent Educational Experiences, and Innovative and Effective Clinical Care

VMTH Highlights

3.2, 3.4

Ginger, a 13-year-old Belgian Malinois, has a complicated case of megaesophagus that progressed to malnutrition and was becoming life threatening until a first-time procedure at UC Davis saved her.

<https://www.vetmed.ucdavis.edu/index.php/news/interdisciplinary-teamwork-and-first-time-surgery-uc-davis-gives-new-hope-dog-complicated>

3.2, 3.4

The Dentistry and Oral Surgery Service at the UC Davis veterinary hospital surgically repaired a severe cleft palate on Chouchou the cat.

<https://www.vetmed.ucdavis.edu/news/oral-surgeons-correct-kittens-severe-cleft-palate>

3.2, 3.4

UC Davis exotic animal specialists treat 80-year-old desert tortoise.

<https://www.vetmed.ucdavis.edu/index.php/news/uc-davis-exotic-animal-specialists-treat-80-year-old-desert-tortoise>

3.2, 3.4

Maria, a 22-year-old chimpanzee from the Sacramento Zoo, visited the hospital for a CT scan and subsequent kidney removal.

<https://www.vetmed.ucdavis.edu/news/sacramento-zoo-chimpanzee-undergoes-kidney-surgery-uc-davis>

Strategy 3.3. Advance Veterinary Medical Center (VMC) Facility Plan, Operations and Infrastructure

Vet Med Financial and Administration

VMDO and VMC – SD: closed the purchase of the Shoreham Place building (\$16M) – the new location for the Hobbs Veterinary Specialty Hospital in SoCal. Selected an architect SRA/BDA to design the space.

VMDO and Working Group Partners: Finalized the Facilities Master Planning Report as part of the Strategic Initiative working group process.

VMDO and VMTH: Relocated the Behavior Service to the Med Sci 1B building. Relocated the Nutrition Service within the VMTH to the former Behavior Space in VM2.

VMDO and CAHFS: Set-up temporary lab space for CAHFS-Tulare lab in the VMTRC due to February flood in Tulare. Working with DCM, CDFA and other State Agencies and campus partners to sort through the repair needs and insurance coverage for the damage to the CAHFS-Tulare lab resulting from the floor.

Office of Advancement

Jan-Mar 2023

- The Office of Advancement closed a \$1M gift to support equipment in the new Center for Veterinary Surgery Center Equipment.

Apr-Jun 2023

- The Office of Advancement closed a \$1.3M pledge to support the purchase of a standing equine CT scanner in the All Species Imaging Center.

Strategy 3.4. Promote Expertise, Program Breadth and Innovation for Reputation and Philanthropic Success

3.2, 3.4

For the first time in more than a decade, a horse's atrial fibrillation was corrected with a transvenous electrical cardioversion, a procedure that shocks the heart back into a regular rhythm.

<https://www.vetmed.ucdavis.edu/index.php/news/electrical-shock-procedure-corrects-horses-irregular-heartbeat>

Goal 4 – Advance the Well-being of Animals and People in California and Around the Globe

Strategy 4.1. Prioritize School Resources that Focus on Initiatives to Address Societal Needs

One Health Institute (OHI)

CVET

- Signed MOU with CalOES and CDFA late December 2022
- CVET operational as of 1/1/23

Oiled Wildlife Care Network

- OWCN has been activated for six spill responses since January 1st (including Montana)
- We've trained 39 new Basic Responders
- Hired a new Wildlife Planning Specialist
- Provided Mutual Aid to the Marine Mammal Care Center in Los Angeles for the demoic acid response through reaching out to the Network and sending OWCN team members to assist.
- Hosted the two recipients of the OHI's Wildlife Health Youth Fellowship and their mothers at UC Davis where they gave presentations on their experience at The Marine Mammal Center in Sausalito. The fellows also had a tour of the OHI lab, the California Raptor Center, and the San Francisco Bay Oiled Wildlife Care & Education Center.
- Attended the Global Oiled Wildlife Response Service (GOWRS) meeting at Massey University in New Zealand
- Presented at the National Wildlife Rehabilitators Conference in Wilmington, Delaware

Rural Domestic Preparedness Consortium (RDPC):

- RDPC Program Manager, Tracey Stevens, managed the delivery of training courses focused on disaster preparedness for rural communities.
- Completed another contract with the Center for Rural Development (CRD) which included the delivery both AWR 328 and MGT 448 course that were taught in multiples states.
- Trained 118 participants in AWR 328: All-Hazards Preparedness for Animals in Disasters; 6 deliveries total
- Trained 99 participants in MGT 448: All-Hazards Preparedness for Animal, Agricultural, and Food-Related Disasters; six deliveries total
- Led by ISD, Heather Johnson, WIFSS completed the Department of Homeland Security (DHS) recertification of course MGT 448, which is now updated with the latest information from FEMA and is certified for another three years.
- Awarded another training contract for the continued delivery of AWR 328 and MGT 448.

The Western Institute for Food Safety and Security (WIFSS)

Chinese Conferences:

- WIFSS partnered with China Agricultural University (CAU), the Chinese Consortium for One Health (CCOH), and the Global One Health Research Partnership (GOHRP) of Nanjing Agricultural University (NAU), Massey University, New Zealand, Wageningen University and Research (WUR), and UC Davis, university to lead the 2023 One Health Conference for Future Global Health, scheduled for [July 17 – August 5, 2023](#), attended by 45 graduate and undergraduate students representing 12 colleges throughout China.
- WIFSS hosted the Education Conference on One Health for Food Safety, Agriculture, and Animal Health, [January 30 – February 10, 2023](#), with co-hosts China Agricultural University, (CAU), and the Chinese Consortium for One Health, (CCOH), attended by 58 graduate and undergraduate students representing 15 colleges throughout China.

Civic Urban Farmer Program:

- Dr. Sara Garcia will provide information on this project separate from this report.

CDFA Contract for Mortality Composting Research and Outreach:

- CDFA has contracted with the California Dairy Research Foundation to implement composting research projects across agricultural regions in California.
- Collaborators include Denise Mullinax, California Dairy Research Foundation; **Dr. Michael Payne, UC Davis School of Veterinary Medicine (SVM)**; Mark Hutchinson, University of Maine School of Composting; Charles Schmidt, Air Quality Consultant; Thomas Card, Environmental Management Consulting; **Bennie Osburn, UC Davis SVM-Western Institute for Food Safety and Security (WIFSS)**
- The aim of this project is to identify and address regulatory, permitting, and operational challenges facing CA producers to enable composting animal carcasses during extreme heat events and other emergencies.

- The goal is to address existing knowledge gaps and bolster CA livestock and poultry producers' preparedness as well as the ability to handle animal mortalities during extreme heat events when rendering is not available.
- Findings from this work can also facilitate future development of a statewide framework for handling animal mortalities in a manner that mitigates risk to human and animal health while enhancing stewardship of the environment and promoting climate resilience of California's agriculture.

Office for Global Programs

Seed Grants for International Activities:

The [SVM Office for Global Programs](#), in partnership with [UCD Global Affairs](#), awarded two Seed Grants for International Activities to SVM faculty:

- **Drs. Maurice Pitesky and Christopher Simmons**

Developing Novel Post-Consumer Food Scraps as a Feed Source for Commercial Village Poultry in Uganda

School of Veterinary Medicine, UCD College of Agricultural and Environmental Sciences, and Pathways to Hope, Africa NGO

- **Drs. Brian Bird and Leith Meyer**

Investigation of Rhinoceros Bloodborne Pathogens and other High Consequence Zoonotic Viruses at Wildlife Corridor Restoration Sites in South Africa

School of Veterinary Medicine and University of Pretoria, South Africa

Center for Equine Health (CEH)

- In May, the Center for Equine Health celebrated its one-year anniversary operating Templeton Farms in Paso Robles. Gina Bornino Miller generously donated the 52-acre sport horse facility to the school. The site supports USDA contagious equine metritis (CEM) quarantine services for horses imported to the West Coast. Future programs will include educational and research opportunities.



UC Davis Center for Equine Health Templeton Farms

- The Center for Equine Health participated in the Western States Horse Expo in June. This event is one of the largest horse expositions in the country, drawing horse enthusiasts from California and beyond. UC Davis faculty and students provided educational talks on equine standing positron emission tomography (PET), emergency preparedness, veterinary school admissions, and neurologic examinations.



Members of the UC Davis Equine Medicine Club spoke about veterinary school admissions during the Western States Horse Expo.

- The Center for Equine Health hosted tribal officials from the Mechoopda tribal nation out of Chico as part of their visit to the UC Davis campus. A tour was provided and discussions ranged from horse health and management to outreach opportunities for students interested in attending veterinary school.



Tribal officials from the Mechoopda tribal nation visited with some of the horses at the Center for Equine Health.

California Animal Health and Food Safety Laboratory (CAHFS)

Equine botulism: When the US Food & Drug Administration (FDA) got involved in a multi-state outbreak of botulism in almost 100 horses, CAHFS partnered with them to provide testing through our participation in the FDA's Veterinary Laboratory Investigation Response Network (Vet-LIRN). Our testing confirmed the presence of botulinum toxin in the cubed alfalfa that was suspected as the outbreak source. The product was recalled and the outbreak was stopped.

Legislative visits: Dr. Ashley Hill met with legislative offices on Capitol Hill as part of the American Association of Veterinary Laboratory Diagnosticians (AAVLD) Government Relations Committee meeting. She met with staff from most of the congressional offices for CAHFS' locations [Representative John Duarte (Turlock), Representative Pete Aguilar (San Bernardino), and Representative David Valadao (Tulare)] as well as Chloe Koseff from Senator Feinstein's office. Everyone was interested in and supportive of what CAHFS does, and many were supportive of increasing Farm Bill funding for the National Animal Health Laboratory Network (NAHLN). With highly-pathogenic avian influenza (HPAI) impacting poultry production and egg prices, and with everyone's increased awareness of the impact of emerging zoonotic diseases (such as COVID-19) on human and animal health, legislators and the public are increasingly aware of the importance and value of our services. Shortly afterwards, Chloe Koseff from Senator Feinstein's office came to UC Davis. Along with the Dean and UC Davis's Government Relations Liaison, Chloe went on a CAHFS tour to see what we do in support of NAHLN. She was impressed by the necropsy floor as well as by the BSL-3 suite.

Dairy cow botulism: CAHFS was instrumental in CDFA's response to a suspected botulism outbreak at a dairy. One pen was affected, and 20 of the 200 lactating cows in the pen died. CAHFS Toxicology provided subject-matter expertise to CDFA MDFS regarding the disposition of the milk, e.g. how many days after exposure would milk from these cows be safe for consumers. Meanwhile, samples of feed from that pen were sent to CAHFS-San Bernardino for testing. A rabbit carcass was evident in the feed, and samples tested positive for Botulism Type C. CAHFS-San Bernardino is one of the few places in the US that is able to confirm and type botulism in animals.

Campylobacter jejuni in raw milk: The San Bernardino Food Pathogen section detected Campylobacter jejuni in a sample of raw whole cow milk. As a result, a statewide recall and quarantine was issued. <https://www.foodsafetynews.com/2023/05/raw-milk-recalled-in-california-after-testing-finds-campylobacter-bacteria-2/>

UC Veterinary Medical Center San Diego (UCVMCSD)

The VMTH has prioritized the distribution of resources to a new San Diego Specialty Hospital that will have a significant impact on revenue generation, advancing specialty medicine in the southern California region, advancing the well-being of animals and people in California as well as promote the UC Davis brand in the region.

Vet Med Financial and Administration

VMDO: (1) developed a presentation for and accompanied the Dean to present the DVM professional fee proposal to the UC Regents; (2) updated DVM return-to-aid allocations to provide some targeted support to students demonstrating need; (3) served on campus revenue generation committee and assisted in finalizing the report; (4) developed and presented with the Dean the SVM budget proposal to Provost

Croughan and the campus budget office; (4) Shireen Lovell led the school's managers in three more iterations of mapping the current financial accounts to a subset of values in our new Common Chart of Accounts. This was an enormous exercise by the school managers and we have two more iterations before the map is final for go-live with the Oracle system. This is in preparation for the transition to a new finance and budgeting system (Aggie Enterprise – an Oracle system) in January 2024; (5) worked with Leslie Nemeth manager and Danika Bannasch Associate Dean of the Office of Research and Graduate Education to develop a one-year bridging program to support faculty with current grants given the cost increases associated with the new academic bargaining unit contracts (for GSRs and other academics).

Strategy 4.2. Enhance Local and Global Communications, and Engagement to Advance the School's Impacts

One Health Institute (OHI)

Rx One Health + UCGHI Planetary Health COE

- The One Health Institute, UCGHI Planetary Health COE and UC Davis Health hosted the 6th annual Rx One Health Field Institute, where 29 participants from around the world spent two weeks exploring California's diverse ecosystems learning about One Health.
- Jennie Lane and Michael Wilkes received a Office of Global Affairs SDG grant, "Place-Based, One Health Experiential Education: A Platform for Inspiring Action in Tackling Complex Global Challenges to Achieve SDGs" <https://globalaffairs.ucdavis.edu/sdgs-grants/2022-23-grantees>

Veterinary Medicine Teaching and Research Center (VMTRC)

UC Davis - Antimicrobial Resistance and Stewardship Seminars at the 2023 World Ag Expo; Tulare, CA; Feb. 14-15, 2023

Seminar presentations by VMTRC faculty members:

Session 1: Antimicrobial Drug Use and Resistance in Dairy Cattle

- Regulatory updates on antimicrobial drug use in food producing animals – Terry Lehenbauer
- Current antimicrobial use and stewardship practices in dairy industry – Sharif Aly
- Monitoring the level of antimicrobial resistance in the dairy industry – Essam Abdelfattah

Session 2: Focus on Management Practices and Tools for Antimicrobial Stewardship

- Opportunities for implementing selective dry cow therapy in the dairy industry – Emmanuel Okello

=====

Faculty and staff members of the VMTRC and CAHFS-Tulare shared information about the School and the admissions process; gave facility tours and presentations about dairy production medicine and food animal diseases and diagnostics; and demonstrated activities involving the milk quality lab and the molecular biology lab to these high school groups and educators:

- Brush High School and FFA members, Brush, CO (~ 50 students & instructor; Feb. 15, 2023)
- Firebaugh High School Ag Science Class, Firebaugh, CA (8 students & instructor; Mar. 3, 2023)
- Ripon High School FFA members; Ripon, CA (16 students & instructor; Mar. 15, 2023)

- E.A.T. (Education & Agriculture Together) Foundation (8 middle school and high school teachers from southern and Central California plus leader; June 20, 2023)
-

UC Davis School of Veterinary Medicine as a member of **NIAMRRE**:

Veterinary Molecular Biosciences (VMB)

- Pamela Lein became a member of the National Academies of Sciences, Engineering and Medicine (NASEM) Committee on Toxicology (1/29/2023 – 11/30/2025), which is an standing committee that provides advice to the Department of Defense on toxicological concerns.
- At the invitation of the Governor of the State of California, Pamela Lein is providing service as a Pathology Expert on the Scientific Review Panel on Toxic Air Contaminants for the California Air Resources Board, California Environmental Protection Agency, 1/1/2023 – 1/1/2025

Koret Shelter Medicine Program (KSMP)

- Continued to band California shelters together through 12 statewide community coaching calls with a special focus on removing barriers to lifesaving through inclusion, cultural humility, and racial equity.
- Hosted an online California Spring Shelter Summit concentrated on coordinated care with five subsequent 8-week training tracks led by social service workers, animal control officers, shelter medicine experts, and shelter directors. Over 1,500 California shelter professionals registered.
- Granted over \$650,000 in collaboration with seven other funders to create a more comprehensive, equitable funding ecosystem.

Strategy 4.3. Increase Multicultural Awareness and Outreach to Underserved Populations and Communities

VMTH Highlights

4.3

PetSmart Charities names endowed chair in access to care for \$6 million.

<https://www.vetmed.ucdavis.edu/news/petsmart-charities-name-endowed-chair-uc-davis-school-veterinary-medicine-6-million-gift>

4.3

Thanks to the UC Davis Access To Care program, a collection of community-based veterinary care options, Tori received quality healthcare and found her forever home.

<https://www.vetmed.ucdavis.edu/news/veterinary-students-family-adopts-patient-her-care>

Office of Advancement

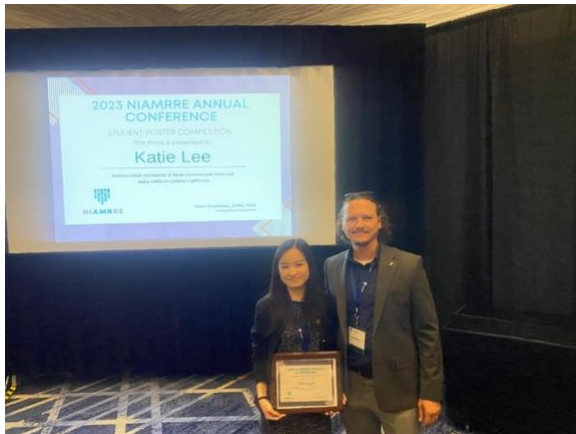
Jan-Mar 2023

- Strategy 4.3: The Office of Advancement closed a \$6M gift to establish an Endowed Chair in Accessible Veterinary Care.

Strategy 4.4. Promote and Support the One Health Approach to Advance the Mission

Veterinary Medicine Teaching and Research Center (VMTRC)

During the May, 2023 National Institute of Antimicrobial Resistance Research and Education (NIAMRRE) Annual Conference in Gainesville, Florida, Katie Lee, PhD student in the Graduate Group in Epidemiology, was awarded 1st place in the Graduate Student Poster Competition for her poster, “Antimicrobial Resistance in Fecal Commensals from Cull Dairy Cattle in Central California,” Katie Y. Lee, Edward R. Atwill, Omran Abu Aboud, Deniece R. Williams, Terry W. Lehenbauer, John Adaska, Richard Pereira, Pranav Pandit, Sharif S. Aly, Xunde Li.



Daniel M. Czyz, Asst. Professor, University of Florida and 2023 NIAMRRE Conference Co-Chair, presented the 1st place graduate student poster award to Katie Lee, UC Davis, for her poster, “Antimicrobial resistance in fecal commensals from cull dairy cattle in Central California.”

(NIAMRRE = National Institute for Antimicrobial Resistance Research and Education)

Veterinary Medicine Teaching and Research Center (VMTRC)

Presentations:

- World Ag Expo (Tulare, February 2023):
 - o Navel size distribution in dairy calves (presenter N. Silva del Rio).
- California Animal Nutrition Conference (Visalia, May 2023)
 - o Survey of California dairy nutritionists on byproduct usage (presenter – Rubia Branco Lopes, PhD candidate)
 - o Smectite supplementation to preweaned dairy calves: Effects on passive transfer immunity, antimicrobial treatments and mortality (presenter – Christian Bernal Cordaba, PhD student)
- ADSA Conference (Ottawa, Canada, June 2023)
 - o Championing the Science of Behavioral Change in Dairy Extension (presenter – N. Silva del Rio, ADSA Extension Symposium)
 - o Navel size distribution in dairy calves (presenter N. Silva del Rio).
 - o Survey of California dairy nutritionists on byproduct usage (presenter – Jennifer Heguy)
- Regional Mastitis Council (Visalia, May 2023)

- Can we feed to prevent mastitis?

Strategy 4.5. Advance Strategic Communications and Use Information Technologies to Demonstrate Program Success and Impacts of Education, Research, and Outreach Programs

Center for Companion Animal Health (CAH):

The [CAH Update Spring 2023](#) newsletter was written and published in collaboration with the SVM Communications team. The newsletter uncovers the secrets to feline longevity, how donor support fosters a passion for research, the incredible Redwood Seed Scholars program at the SVM, efforts to keep people and pets together through hardship, how oral cancer treatments are being revolutionized, and the ways that the generosity of the Dmarlou Foundation helps advance our shared goals of improving animal health and welfare for countless cherished pets.

SVM Information Technology

SVM-IT accomplished the following highlighted projects for the first two quarters of 2023:

System Administration

- Server work over the last six months: A new Zabbix server was built. Upgraded the DHCP server that serves the OU, SVM and VETMED domains. Completed Print server migrations. Completed server build for Xerox/Inland. Shutdown the last of 33 windows 2008 R2 servers. Set up a vSphere server in the VMA server room including the addition of 16TB of local storage. Virtualized the VMACS-DB3 which allowed us to shut down a physical server and end a 3rd party support contract thus saving on costs. All legacy file share services have been migrated to a supported server.
- Fixed all buildings' Kiosk devices and ensured they were accessible via Remote Control.

VMACS

- Updated the client portal to hide discharge instructions for deceased patients
- Updated the timing on client SMS appointment reminders and automated call reminders.
- Began development on San Diego Client and RefVet Portals.
- Client portal updates: Permit file attachments for messages, and removed the option to change the Portal CPR and DNR status.

VIPER

- Released a new tool for managing Lenel ID cards
- Overhauled the CREST reports and menu structure for clarity and functionality
- Supporting the lived names project, all instances of *student* genders in VIPER now support the non-binary gender option. Similar updates on OASIS and the applicant portal.
- Major CREST updates to reports including cleanup and reorganization. Crest and AAUD were updated to use preferred/lived names rather than legal.

Project Management

- Ecotime Unification Project Planning – engaged with the UC Davis Health System to merge our payroll instances of Ecotime.

Other Program Development

- Created a new Disaster Recover Policy for VMACS
- Onboarded a new VIPER developer Jason Francis
- Onboarded new Operations staff member Dante Domingo.

Help Desk

- Completed several VMTH moves:
 - Behavior Service to the Med Sci 1B building
 - Central Services
 - LA managers
- Integrated PCR lab in the VMTH including new computers, accounts and changes to the network as well as printers.
- Over the last six months, help desk tickets have hovered around 800 per month, with slightly more closed than opened. As a result, the number of pending tickets has dropped from over 1100 to ~850, progress is being made.

Major Media Hits

“Pet Innovations”

[VOA TEK](#)

Everything You Need To Know About EHV-1

[The Horse](#)

Increasingly Available, Equine PET Scans Have ‘Revolutionized Our Approach To Imaging Of Lameness’

[Paulick Report](#)

Box of Puppies Dumped During Storm, UC Davis Vets Give One Pup Blood Transfusion

[KCRA](#)

Threats from Ticks, Fleas and Mosquitoes on the Rise After Historic Rainfall

[Fox Weather](#)

UC Davis Appoints New Chair in Companion Exotic Animal Medicine

[DVM360](#)

Can Cats Tell Time? Yes, But It's Complicated

[Inverse](#)

UC Davis Oral Surgeons Repair Kitten’s Severe Cleft Palate

[DVM360](#)

91% Increase in Dogs Put Down at The Animal Foundation from 2021 to 2022

[KLAS](#)

Veterinarians Explore Alternative Approach to Managing EPM in Horses

[The Horse](#)

Large Bladder Stone Removed from 80-Year-Old Desert Tortoise

[DVM360](#)

UC Davis Vet School Will Open New ER, ICU

[Sacramento Bee](#)

Why Would Lawmakers Come After Your Dog's Favorite Hobby?

[Something Offbeat podcast](#)

Untangling Surgical Snags

[DVM360](#)

Consulting A Veterinary Behaviorist – Could It Help You and Your Pet?

[FOX 28 Spokane](#)

How Prosthetics Enable Specially-Abled Pets

[AAHA News](#)

It Takes a Village

[AAHA News](#)

'Evil Little Things': This California Plant Could Hurt Your Pet and Cost You Thousands

[The Sacramento Bee](#)

Critically Endangered Sumatran Orangutan at Sacramento Zoo Gives Birth

[KCRA](#)

PetSmart Charities Will Gift \$6 Million to UC Davis with Endowed Chair

[DVM360](#)

Goal 5 -Promote a Vibrant and Diverse Community

Strategy 5.1. Build Community through Value, Respect and Awareness for All

Admissions and Student Programs

- Karl Jandrey hosted the ConflictRx session for faculty and staff.

Awards, Strategy 5.1

- Melanie Gareau and Karen Shapiro honored as 22-23 Chancellor's Fellows
- Danika Bannasch and Pamela Lein honored as AAAS Fellows
- Chris Lucchesi, Academic Federation's 2023 Excellence in Research Award
- Stuart Meyers, Academic Senate's 2023 Distinguished Teaching Award
- Kate Hopper, 2023 Zaslow Distinguished Service Award, Veterinary Emergency and Critical Care Society
- Boaz Arzi, AVMF/EveryCat Health Foundation Research Award, American Veterinary Medical Association Council on Research
- Philipp Mayhew, 2023 recipient of the Simon Award from the British Small Animal Veterinary Association
- Crystal Rogers, Chancellor's Fellow for Diversity, Equity, and Inclusion
- Stuart Meyers, David E. Bartlett Lifetime Achievement Award from the Society for Theriogenology.

- Catherine Outerbridge, 2023 Král Award recipient by the American Academy of Veterinary Dermatology in recognition for outstanding achievements and dedicated service to the veterinary profession and specialty of veterinary dermatology

Strategy 5.2. Clarify and Support Expectations for Career and Personal Development of Faculty, Staff, and Students

- Ilana Halperin, Clinician Health and Well Being Fellowship program
- Jonathan Dear, Amandine Lejeune, Robert Rebhun, and Simone Stoute accepted into the UC Davis Leadership Academy
- Wendi Jackson, Maria Soltero-Rivera, and Ehren McLarty, accepted into the National Center for Faculty and Diversity and Development's Fall Faculty Success Program
- Joanne Paul-Murphy – Retired in early February 2023

Strategy 5.3. Recognize the School's Sustainability and Success Depends upon our People Resources

Vet Med Financial and Administration

VMDO: (1) finalized the SVM's equity proposals and roll-out for the fiscal year. (2) ensured the non-represented staff e-performance reviews were finalized for this fiscal year. (3) hired the new CVMO for the SD clinic – Dr. Brett Feder. (4) received approval for performance incentive program for CVMO in SD.

Leadership Appointments/Reappointments

- Danika Bannasch, Reappointed as Assoc Director of CCAH-Genetics, 1/1/23
- Kate Hurley, Reappointed as Assoc Director of CCAH-Shelter Medicine, 1/1/23
- Robert Rebhun, Reappointed as Assoc Director of CCAH-Cancer Programs, 1/1/23
- David Guzman, Appointed as the Messmer Family Presidential Chair in Companion Exotic Animal Medicine and Surgery Service
- Danika Bannasch, Reappointed as Maxine Adler Chair in Genetics, 3/1/23
- Robert Rebhun, Reappointed as Maxine Adler Chair in Oncology
- Danika Bannasch, Appointed Associate Dean for Research and Graduate Education Programs, 3/1/23
- Bethany Cummings, Appointed Director, Veterinary Scientist Training Program, 3/1/23
- Denise Imai-Leonard, Appointed Vice Chair, Department of Pathology, Microbiology and Immunology, 5/1/23
- Tony Buffington- Reappointed as Clinical Professor Volunteer in VME
- Bruno Pypendop, Appointed Interim Executive Associate Dean (technically 7/1/23)
- Lisa Tell, Appointed Associate Dean for Academic Personnel (technically 7/1/23)
- Denis Marcellin-Little, Appointed Interim Chair of Surgical and Radiological Sciences (technically 7/1/23)

New Faculty Appointments



Wendi Jackson, Assistant Professor of Clinical Diagnostic Epidemiology, CAHFS and VME,
1/3/23



Omar Gonzales-Viera, Assistant Professor of Clinical Diagnostic Pathology, CAHFS and PMI,
2/1/23



Raul Resendiz, Assistant Professor of Clinical Pathology, Tulare, CAHFS and PMI, 4/1/23



Ronald Koh, Associate Professor of Clinical Small Animal Sports Medicine and
Rehabilitation, VSR

Veterinary Medicine Teaching and Research Center (VMTRC)

Publications:

[Characterization of controlled trials on probiotic supplementation to dairy calves: A scoping review.](#)

Branco-Lopes R, Bernal-Córdoba C, Valdecabres A, Winder C, Canozzi ME, **Silva-Del-Río N**. J Dairy Sci. 2023 Aug;106(8):5388-5401. doi: 10.3168/jds.2022-23017. Epub 2023 Jun 16. PMID: 37331870 **Free article.**

[Antimicrobial stewardship on the dairy: Evaluating an on-farm framework for training farmworkers.](#)

Garzon A, Portillo R, Habing G, **Silva-Del-Río N**, Karle BM, Pereira RV. J Dairy Sci. 2023 Jun;106(6):4171-4183. doi: 10.3168/jds.2022-22560. Epub 2023 Apr 5. PMID: 37028970 **Free article.**

[Implications of supplementing mid-lactation multiparous Holstein cows fed high by-product low-forage diets with rumen-protected methionine and lysine in a commercial dairy.](#)

Abreu MB, Valdecabres A, Marcondes MI, Correa A, Lobos NE, Peterson CB, Atwell D, **Silva-Del-Río N**. Animal. 2023 Apr;17(4):100749. doi: 10.1016/j.animal.2023.100749. Epub 2023 Feb 25. PMID: 36940630 **Free article.**

[Negative dietary cation-anion difference in prepartum dairy cow diets: a pragmatic study in two commercial dairy farms.](#)

Valdecabres A, **Silva-Del-Río N**. *Animal*. 2023 Apr;17(4):100731. doi: 10.1016/j.animal.2023.100731. Epub 2023 Feb 11. PMID: 36868058 **Free article**.

[Perspectives of dairy employees at the beginning of the COVID-19 pandemic: A survey of health risks and educational needs.](#)

Ferreira FC, Rovai M, Chahine M, de Haro Marti M, Wenz J, Dalton J, **Silva-Del-Río N**. *JDS Commun*. 2023 May;4(3):186-190. doi: 10.3168/jdsc.2022-0253. Epub 2023 Feb 16. PMID: 36811073 **Free PMC article**.

****Editor choice article of the month**

[Production and reproduction responses for dairy cattle supplemented with oral calcium bolus after calving: Systematic review and meta-analysis.](#)

Valdecabres A, Branco-Lopes R, Bernal-Córdoba C, **Silva-Del-Río N**. *JDS Commun*. 2022 Nov 18;4(1):9-13. doi: 10.3168/jdsc.2022-0235. eCollection 2023 Jan. PMID: 36713128 **Free PMC article**. Review.

Awards:

- Christian Bernal PhD student awarded Velez fellowship (\$ 50,000)
- Christian Bernal PhD student nominated for UC Davis Teaching Assistant Award

New memberships:

- Member of the technical advisory subcommittee (TASC) for the feed and livestock drugs inspection program.
- California Animal Nutrition Conference organization committee

One Health Institute (OHI)

Publications with citation:

- Projecting the impact of an ebola virus outbreak on endangered mountain gorillas. Zimmerman DM, Hardgrove E, Sullivan S, Mitchell S, Kambale E, Nziza J, Ssebide B, Shalukoma C, Cranfield M, Pandit PS, Troth SP, Callicrate T, Miller P, Gilardi K, Lacy RC. *Scientific Reports*. 2023 Apr 7;13(1):5675.
- Rapid genomic surveillance of SARS-CoV-2 in a dense urban community of Kathmandu Valley using sewage samples. Napit R, Manandhar P, Chaudhary A, Shrestha B, Poudel A, Raut R, Pradhan S, Raut S, Rajbhandari PG, Gurung A, Rajbhandari RM, Dixit SM, Schwind JS, Johnson CK, Mazet JK, Karmacharya DB. *PLoS ONE*. 2023 Mar 30;18(3):e0283664.
- One Health Surveillance Highlights Circulation of Viruses with Zoonotic Potential in Bats, Pigs, and Humans in Viet Nam. Latinne A, Nga NTT, Long NV, Ngoc PTB, Thuy HB, PREDICT Consortium, Long NV, Long PT, Phuong NT, Quang LTV, Tung N, Nam VS, Duoc VT, Thinh ND, Schoepp R, Ricks K, Inui K, Padungtod P, Johnson CK, Mazet JAK, Walzer C, Olson SH, Fine AE. *Viruses*. 2023 Mar 20;15(3):790.
- Exposure to diverse sarbecoviruses indicates frequent zoonotic spillover in human communities interacting with wildlife. Evans TS, Tan CW, Aung O, Phyu S, Lin H, Coffey LL, Toe AT, Aung P, Aung TH, Aung NT, Weiss CM, Thant KZ, Htun ZT, Murray S, Wang LF, Johnson CK, Thu HM. *International Journal of Infectious Diseases*. 2023 Mar 3;S1201971223000644.
- Novel strains of *Campylobacter* cause diarrheal outbreak in Rhesus macaques (*Macaca mulatta*) of Kathmandu Valley. Napit R, Manandhar P, Poudel A, Rajbhandari PG, Watson S, Shakya S, Pradhan SM, Sharma AN, Chaudhary A, Johnson CK, Mazet JK, Karmacharya D. Novel strains of *Campylobacter* cause diarrheal outbreak in Rhesus macaques (*Macaca mulatta*) of Kathmandu Valley. Bhatta DR, editor. *PLoS ONE*. 2023 Mar 1;18(3):e0270778.

Awards/Honors to faculty, students or staff:

- Two CREID Network Pilot Awards (approximately \$150,000 each) were received by international investigators supported by the EpiCenter for Emerging Infectious Disease Intelligence:
 - Dr. Miguel Garcia Knight, Virome diversity across ecological niches in mosquito vectors in Mexico and Uganda
 - Dr. Francesca Falconi Agapito and Dr. Philippe Selhorst, Application of mNGS to identify etiologies of acute undifferentiated fever in the Peruvian Amazon
- NIH R21 Award: Advancing One Health Data Capture at the Point of Zoonotic Spillover in the Congo Basin Forest Perimeter
- NIH R21 Award: Investigation of sarbecovirus exposure patterns and development of pan-SARS-CoV-2 neutralizing antibody responses in high-risk cohorts in Myanmar.

News/Media Coverage (print, digital, podcast, TV, etc.):

- PBS News Hour: Is climate change accelerating the risk of disease spreading from animals to humans?
1 March 2023
<https://www.pbs.org/newshour/show/is-climate-change-accelerating-the-risk-of-disease-spreading-from-animals-to-humans>

Can we make gorillas sick? Study reveals much about them — and us.

Washington Post, 25 March 2023

<https://www.washingtonpost.com/science/2023/03/25/gorilla-saliva-reveals-diseases/>

U.S. Science Envoys: Advancing U.S. Foreign Policy Through Science Diplomacy

U.S. Dept. of State, 10 February 2023

<https://www.state.gov/u-s-science-envoys-advancing-u-s-foreign-policy-through-science-diplomacy/>

Armed with air samplers, rope tricks, and—yes—ants, virus hunters spot threats in new ways —
Science, 04 January 2023

<https://www.science.org/content/article/armed-air-samplers-rope-tricks-and-yes-ants-virus-hunters-spot-threats-new-ways>