UC Davis Tops World Rankings in Veterinary Science

• For 3rd year in a row, held onto its top spot in veterinary science in the latest QS World University Rankings

• “First in veterinary science since the field was added to the rankings in 2015, UC Davis is renowned for applying a “One Health” approach to addressing critical health concerns on a local and global scale”

• “Also for the fifth consecutive year, the campus is among the top-ranked universities in agriculture and forestry, taking second place in the ranking this year”
Mission
Advance the Health of Animals, People, and the Environment

Vision
Leading Veterinary Medicine Addressing Societal Needs
Goal 1.1: Attract, Mentor, Support the Best and Brightest Students

Class of 2021
- 147 Students (1030 Applicants)
- 124 California residents
- 3 WICHE residents
- 19 Non-Residents
- 1 International
- 116 females, 31 males

- Avg. Science GPA 3.71
- Avg. Quant GRE Score 75%
- Avg. age 23 (Range 20 – 39)
- 44% URM students (Top 3 in nation)

Areas of interest species specific: small animal (60), mixed animal (32), wildlife (18), equine (9), small/equine (9), large animal (5), lab animal (6), zoo (3), food animal (2), avian/exotics (3)

Areas of veterinary interest at application: Practice/Specialty Practice (116), Academics/Research/Teaching (23), Public Health (8)

Ethnicity: Caucasian (83), Asian/Other Asian (30), Multi-Ethnic (26), Hispanic/Mexican American/Other Spanish (7), African American/Black (1)
Goal 1.1: Attract, Mentor, Support Students & Trainees

Career

- **VetMedJobs** – 298 positions posted; 171 open now!
- Developed Resume Books within VetMedJobs
- Broadened SAVMA Faculty Mentor Program
- Career Fair part of the 2017 Fall Festival Veterinary Career Advisor Network (VetCAN)

Leadership

- **Professional Concentration** in Personal Development and Leadership - 1st class of graduates (2018)
- Continued **One Hour Leadership Series**
- Collaborated with VBMA - **Business Certificate Program**
Wellness

- Counseling services to 195 students - 1400 appointments
- Weekly Support Group to provide ongoing group therapy
- Multiple lunchtime wellness talks & 2nd Wellness Symposium
- AAVMC Veterinary Wellness Summit
- Healer’s Art Program – 42 students & 7 DVM facilitators (3 faculty)
- Wake up for Wellness boost morale & build community
- Promoted the SVM Each Aggie Matters Campaign
- QPR (Question, Persuade, Refer) Suicide Prevention Training to our faculty and staff
• Mission: “The Teaching Academy will support the development and implementation of best practices and scholarship in veterinary medical education”

• Regional and 5 Local Teaching Academies formed e.g., initially 12 UC Davis faculty
• Biannual regional meetings to promote best practices in teaching
• Initiatives including: External Peer Review of Teaching, Faculty Development, Local Peer Observation of Teaching
Goal 2: Forefront of High-impact Transdisciplinary Research

Uniquely contribute to biomedical, agricultural, global health, and environmental research through specialized training in animal biology and medicine to understand interface of animals, people, and the environment.
Goal 2: Transdisciplinary Research - DVM Student Training

- **STAR 2017**
  - **43 Funded** – 15 NIH, 1 AVMF/AVMA Award, 1 Morris Animal Found. Award, 2 NEW STAR Exchange with UC Dublin
  - **Merial-NIH Conference**: 14 DVM students presented at OSU
- **PacVet Conference**: San Francisco - 5 UCD SVM participants
- **CDC DAY 2017** – 10 UCD SVM participants
Veterinary Scientist Training Program

- 15 current students
- 2 new students from ~35 applicants (30 prospective & 5 current DVM students)
- 28 graduates: 10 in academic; 2 in industry; >11 in residency training

Honors and Awards

- Emily Brown - Dechra Early Career Abstract Award – at ACVIM Forum
- Samantha Fousse - AVMA/AVMF scholarship
- Evelyn Bulkeley - Ann T. Bowling fellowship
- Eric Velazquez - ARCS Graduate Scholarship & UCD Dissertation Year Fellowship

Publications

- **Nature.** 2016 Jun – co-authored by Eric Velazquez
- **Science.** 2016 Sep - co-authored by Eric Velazquez
- **Nature Scientific Reports** 2017 – co-authored by Kate Gates
Goal 2: Transdisciplinary Research - Support Research Training

- NRSA (F30/F31) Grant Workshop & 1-on-1 Mentoring
  - 21 participants (VSTP, PSTP, PhD); 3 VSTP submissions

- HHMI-BWF Medical Fellows Research Program
  - Hannah Lawrence, Breakthrough on Zika, *Science* 2016

- GSSP/YEAR Fellowships (2017)
  - 12 Stipends Funded @ $28,000
  - 3 NIH T32 YEAR Stipends Funded @ $28,000
  - 3 VSTP Fellowships awarded
Goal 2: Transdisciplinary - Graduate Group Support

Epidemiology
51 Students, 46 Publications

Immunology
34 Students, 45 Publications

Integrative Pathobiology
48 Students, 30 Publications

Preventative Veterinary Medicine
13 Students, (Master Program)

Student Recruitment Funds
Administrative Matching Funds
Infrastructure Support

Leading Veterinary Medicine, Addressing Societal Needs
Goal 2: Transdisciplinary Research and Innovations

- **Research Grants**
  - ✓ 212 grants, $73,605,805

- **Total Research Expenditures (to date)**
  - ✓ $66,867,596

- **1-on-1 Research Proposal Mentoring**
  - ✓ 10 proposals mentored, 3 funded

- **Vector Borne Disease Pilot Grant**
  - ✓ 10 proposals reviewed, 2 funded

- **Interdepartmental Research Seed Grant**
  - ✓ ~50 proposals reviewed; 8 funded, 2 SVM PI/Co-PI

- **Biomedical + Engineering Entrepreneurship Academy (BMEA)**
  - ✓ Sponsored 8 SVM faculty attendees
  - ✓ 19 invention disclosures, 16 patents filed, 4 granted
Goal 2: Transdisciplinary Research and Innovations

- Genetic test based on missense mutation a **genetic risk factor** for limbal squamous cell carcinoma in horses
- Equine Intracytoplasmic Sperm Injection (ICSI) to enhance **equine reproduction**
- **Quantification of chemical toxins** in to ensure safe milk supply
- Evidence of reactive oxygen species-mediated damage to mitochondrial DNA in **children with autism**
- Sugary drinks increase risk of **heart disease**
- Department of Homeland Security funds to produce **computational tools to help understand microbial communities**
Goal 2: Transdisciplinary Research and Innovations

- Development of **Transformational Professional Development Model for 4-H Educators**, involving 10 Land Grant Universities

- NIH SPARC: Stimulating Peripheral Activity to Relieve Conditions-Mapping of Neuroanatomy and Neurobiology of Organs

- 100K Pathogen Genome Project, **whole genome sequence of bacterial pathogens** of importance to food safety, public health, and livestock health

- NIH S10: **CytoViva Microscope** – to study of unstained tissues, viruses, bacteria and particles

- USEPA-Star: **Epigenetic effects of pyrethroid pesticides** on inland silversides

- NIH R01 – **Probiotics and the Microbiota-Gut-Brain Axis**
Goal 2: Transdisciplinary Research and Innovations

Center for Equine Research

Selected Grant Topics 2016-2017:
- Engineering Osteochondral Implant
- Novel Analgesic
- Evaluation of Arena Surfaces
- Optimization of MRI
- Genetic Risk Factor for Cancer
- Metabolic Activity using PET
- Stem Cell Tracking
- Genetics of Neonatal Isoerythrolysis
- Equine Recurrent Uveitis
- Genetic Markers of Racing Durability
- Equine Coronavirus in healthy horses
- Rhodococcus equi: Role Caspase-1
Equine PET Imaging

- **First equine PET** program in the world
- **Over 30 horses scanned** (including 15 clinical cases) since scanner installed in August 2016
- Used for **research** on equine bone stress modeling, osteoarthritis, laminitis and tendon disease
- **Keynote presentation at ACVR** by Dr Spriet in October 2016
Goal 2: Transdisciplinary Research and Innovations

Center for Companion Animal Health

- Faculty Support: $1,050,252
- Resident Grants: $58,674
- Equipment: $146,355
- PET Scanner: $560,089

Total: $1,815,370

Selected Highlights:

- **Shelter Medicine**: ~800,000 cats saved in 3 years - Million Cat Challenge Program – K. Hurley and team

- Potency of cancer Rxs. *Vet Comp Oncol.* 2017 Burton JH, Knych HK, Stanley SD, Rebhun RB.


Goal 2: Transdisciplinary Research and Innovations

Center for Comparative Medicine

- Current Annual Grant Portfolio: $23,636,076
- Increase of 9.8% Over Prior Fiscal Year
- 48 Active Awards from Government and Industry Funding

Training

- Murray B. Gardner Junior Faculty Mentoring Program
- Thomas W. North Memorial Graduate Student Scholarship
- NIH T32: Comparative Medical Science Training Program, PI: Baumgarth, 5 Postdoctoral Scholars
- NIH T32: Animal Models of Infectious Diseases Training Program, PI: Solnick, 6 Postdoctoral Scholars on NIH Funds & 4 Postdoctoral Scholars on UCD Matching Funds
NHP models of Zika virus at CNPRC/SVM

Pathogenesis:
- Transmission routes:
- Time course of infection:
- Clinical outcome:
- Viral and host determinants of pathogenesis:

Interventions:
- Antiviral drugs
- Vaccines: NIH DNA vaccine
- Other

Goal 2: Transdisciplinary Research and Innovations
Goal 2: Transdisciplinary Research and Innovations

UC Davis CounterACT Center of Excellence identifying improved medical countermeasures for chemical threat agents in humans and animals

Pamela Lein, Center Director and Project Leader; Isaac Pessah, Project Leader, Ben Moeller, Training Core Leader

- Network Research Symposium, UC Davis, June, 2016
- Center renewed for another 5 years (2017-2022)
- Improved countermeasure for status epilepticus
- Potential in drug-refractory seizures in dogs
- SVM research infrastructure in drug discovery
  - ImageExpress High content imaging system
  - FLIPR high-throughput cellular screening system
Goal 2: Transdisciplinary Research and Innovations

Veterinary Institute of Regenerative Cures (VIRC)

Selected Highlights 2016-2017

- Developed fee-for-service program, > 4 industry partners and growing
- Initiated new clinical trials in naturally-occurring diseases in animals
- Held CE symposium: Clinical Innovations in Regenerative Medicine
- Supported graduate student research
- Seminar Series and New courses
- 41 faculty from SVM, SOM, COE, and CAES
- Pilot Grants: Received 12 applications and funded 4
- Grants submitted - Submitted (Since June 2016): 2 NIH R01, 1 NIH R21, 2 Morris Animal Foundation, 2 American Kennel Club, 1 Winn Feline, 1 Shriners, 1 CCAH
Goal 2: Transdisciplinary Research and Innovations

Bioanalytical Research Core (BARC)
http://www.vetmed.ucdavis.edu/barc
- Birgit Puschner and Heather Knych - Co-Directors
- Pharmacokinetic/pharmacodynamic study design
Goal 3: Provide cutting-edge clinical programs supporting education, research, and service

Veterinary Medical Teaching Hospital consistently ranks at the top among all academic veterinary hospitals in reputation and patient visits ~55,000+ patients 2016-2017

- 120+ board-certified faculty
- 340+ staff members
- 109 house officers training in 34 specialty disciplines
- 135+ 4th year students
- Many Veterinary Technician Specialists
Goal 3.1: Provide outstanding patient care in an efficient, compassionate and service-oriented manner

Quality Customer Service – Veterinary Hospital Staff
Goal 3: New Veterinary Hospital Administrators

- **Dr. Jane Sykes** appointed as the chief veterinary medical officer of the VMTH effective June 1, 2016 for a five-year term

- Administrative responsibility for the management and fiscal integrity of the VMTH, ensuring academic quality of the clinical learning environment, provision of clinical care and operational efficiency of all academic and clinical service activities

- **Joy Hoover** appointed as Hospital Administrator for VMTH to work with the Chief Veterinary Medical Officer, Clinic Directors, the Financial Officer, and the Office of the Dean to oversee the management and fiscal integrity of the VMTH
Goal 3.3: Capitalize on clinical caseload to support excellence in translational and clinical research

- Minimally Invasive Radiology and Surgical Procedures
- Translational Discoveries Through Clinical Trials
- Advanced Surgical Techniques with Bioengineers
- State-of-the-Art Imaging Developments
- Drug Discovery for Animals and People
- Leading Comparative Ophthalmology
- Novel Cancer Treatments – Comparative Oncology

UC DAVIS VETERINARY MEDICINE

Leading Veterinary Medicine, Addressing Societal Needs
Goal 3.3: Capitalize on clinical caseload to support excellence in translational and clinical research

Combined Radiotherapy & Immunotherapy – A novel triple therapy in a canine clinical trial

Veterinary cardiologist Joshua Stern and team have shown a novel drug, MYK-461, effective in treating a naturally occurring form of inherited hypertrophic cardiomyopathy (HCM), a currently incurable disease that also affects humans.

HCM most common form of feline heart disease - results in thickening of heart ventricles and altered heart function, frequently → fatal consequences

Goal 3.3: Capitalize on clinical caseload to support excellence in translational and clinical research

Veterinary Center for Clinical Trials

- Increased Clinical Trials & Administrative Support
- Added Pharmacology Consultation Support
- Clinical Trials Activity
  - 77 active clinical trials posted on VCCT website
  - 2016-17: 7 externally funded trials, $426,689*
Goal 3: Provide cutting-edge clinical programs that support education, research and service
Goal 3.2: Foster Excellence in Clinical Teaching House Officers/Residents

- Re-initiated Chief House Officer
  - Dr. Kate Farrell
- Highly sought-after world-class training programs, with high board certification rate
- Dr. Sara Gardhouse - 2017 AAVC Outstanding Resident Award
- Dr. Fauna Smith and Kate Farrell – Selected to attend the AAVC Resident Professional Development and Leadership Conference
- House Officer Seminar Day - 48 abstracts many presented in national forums
Goal 3: VMTH Activities to Support Excellence in Clinical Education, Research and Service

- VMTH Strategic Planning Process – AMC Strategies
- Formation of the Veterinary Medical Staff Executive Committee
- Formation of VMC Art Committee
- Development and Implementation of California Licensing Curriculum
- PeopleFirst Leadership Training, Large Animal Clinic
- New VHIS Project
- Transition from VOLES to Eval360
- Implementation of CalPro Monthly Client Satisfaction Survey and Large Animal Clinic Referring Veterinarian Survey (latter in progress)
- New iPhones and implementation of Five9 VoiceOver IP
- Facilities Planning and Improvement New CAPE examination rooms & remodel of Client Services
- Capital Equipment Planning, Resourcing and Purchase
Goal 4: Advance the well-being of animals and people in California and around the globe
Goal 4.2: Broaden the Diversity of the School’s Community

K-12

• **Summer Math and Science Honors (SMASH) Academy**
  - With UC Davis Admissions. Summer college-prep & veterinary introduction for low-income/underserved high school students

• **COSMOS**
  - Six-week biomedical camp for high schoolers. Clinical case projects with anatomy, pathology, radiology, infectious medicine

• **Veterinary Medicine Exploration Academy**
  - Academic prep for first generation and low-income high students

College Level

• **Vet Start**
  - 6 week pilot with Department of Animal Science. Research mentorship for first-generation undergrads

• **Summer Enrichment Program**
  - Prepare disadvantaged students with experience in teaching hospital, GRE study resources, and DVM career options
Goal 4.2: Broaden the Diversity of the School’s Community

- Multicultural Seminar Series and Community Dialogue
- On-line Training Certificate Program - 40 Staff & Faculty
- Principles of Community Training - Incorporated in VET400
- UC Davis Veterinary Students as One in Culture and Ethnicity (VOICE) - 2017 Diversity Day
- Broad Spectrum: Student Chapter of the Lesbian & Gay Veterinary Medical Association (LGVMA)
- Coalition of Veterinary Students for Diversity and Inclusiveness
- Pre-Vet Students Supporting Diversity
Goal 4: Advance the well-being of animals and people in California and around the globe

Office of Global Programs

• Award-winning One Health Video - Knights Landing One Health Clinic
• Expanded services with hire of a new Administrative Assistant (Lisa Milbrodt) and Global Health Fellow (Marlene Haggblade)

• Expanded Opportunities for SVM students:
  ✓ 35 students – Internatl. Fellowships/Externs
  ✓ Creation of 6 new Global Feline Health and Underserved Community Fellowships
  ✓ Support for Rx One Health Course with OHI

• Expanded Partnerships and Opportunities for SVM faculty and graduate students:
  ✓ UC² Symposium in Dublin, Ireland hosted by University College Dublin - 9 SVM faculty and 1 graduate student
  ✓ University of Sydney – UC Davis Partnership with Seed Grants awarded to Drs. Carrie J. Finno and Amir Kol
Goal 4: Multicultural Competency
Knights Landing One Health Clinic

Click here to play the video
Goal 4: Advance the well-being of wildlife and people in California and around the globe

Karen C. Drayer Wildlife Health Center

• History is rooted in One Health approach to conservation and the ecosystem health perspective

  ➢ Oiled Wildlife Care Network
    ✓ Expanded inland California oil spill response capabilities → deployment drill in the Feather River Canyon region
    ✓ Provided training and expert consultation for oil spill readiness and response in >7 countries

  ➢ California Conservation
    ✓ Completed strategic planning for the California Raptor Center
    ✓ Awarded new CDFW funds for breeding & reintroduction of white abalone

  ➢ Training Programs
    ✓ Funded and recruited nation’s first free-ranging wildlife health residency program (first resident to start in August)
Goal 4: Advance the well-being of wildlife and people in California and around the globe

- **SeaDoc Society**
  - Successful launch of the Salish Sea Forever campaign ($1.15M)
  - Hired program’s first full-time Regional Director

- **Gorilla Doctors**
  - 41 clinical interventions to treat ill and injured endangered mountain gorillas in Rwanda, Uganda and DR Congo
  - Program featured on *60 Minutes* in October

- **California Raptor Center**
  - Substantially increased the number and scope of educational programs
  - Received over 10,000 visitors last year
  - Completed intensive strategic planning exercise, including new facilities and planning
  - Increased collaboration with campus, USFWS, CDFW, and others.

- **Latin America Program**
  - Published a comprehensive global review of causes of mortality in albatross and petrels
  - Achieved lead ammunition ban in central Argentina

- **Marine Laboratory**
  - Received >1,000 samples, now serves 52 clients/facilities including Alaska, Hawaii, throughout coastal US mainland; continued support testing for Marine Mammal mortality events
Goal 4: Advance the well-being of animals and people in California and around the globe

US AID PREDICT

• Trained >3,300 field personnel, veterinarians, laboratory technicians, public health workers and ministry officials in 50 labs from >30 countries

• >70,000 samples from non-human primates, bats, etc. at human-wildlife interface at high risk for pandemic diseases; ~1,000 viruses detected, ~800 novel and ~200 known viruses

• Publications: Global patterns in Coronavirus Diversity – *(Virus Evolution)*; and evidence for bats as the evolutionary source of MERS Coronavirus *(mBio)*

• Future Goal – Global Virome
Goal 4: Advance the well-being of animals and people in California and around the globe

EpiCenter for Disease Dynamics

- Modeling disease threats at interface
- Integrating big data to inform real-time biosurveillance
- Analytical tools for data science, risk, and forecasting
- Department of Defense - Defense Threat Reduction Agency - Projects
  - Developed a data driven framework for zoonotic disease
  - Modeling the impact of risk of zoonotic disease outbreaks
- Wildlife reservoirs for Zika in Bolivia and Argentina
- Develop machine learning algorithms of zoonotic spillover and spread events
Goal 4: Advance the well-being of animals and people in California and around the globe

Center for Animal Disease Modeling and Surveillance (CADMS)

- Provides a coordinated, multidisciplinary, research to develop models and modeling systems for animal disease worldwide
Goal 4: Advance the well-being of animals and people in California

Center for Equine Health Advancing Disaster Preparedness

- Recent weather events led to declarations of emergency in 50 of California’s 58 counties → Pet and livestock safety a growing concern in the face of deadly wildfires and floods

- **Center for Equine Health** teamed up with the **International Animal Welfare Training Institute** and other entities of the School of Veterinary Medicine to support major advances in disaster preparedness

- **Mr. Jim Green**, co-founder and director of the British Animal Rescue and Trauma Care Association contracted for 1 year to train veterinarians and rescue personnel (including UC Davis Fire Dept.) in best practices in technical animal rescue
Goal 4: Advance the well-being of animals and people in California and around the globe

• Dr. Joanne Paul-Murphy, recognized by the New Zealand Kakapo Recovery Group for her work to save a critically endangered parrot species; the Kakapo, a large, flightless nocturnal parrot indigenous to New Zealand

• Drs. Gregory Lanzaro and Bradley Main, and team discovered that some mosquitoes are genetically wired to select cattle rather than humans, while studying the Anopheles arabiensis mosquito, the primary transmitter of malaria in East Africa → new methods for controlling mosquitoes and stopping the spread
Planetary Health Center of Expertise
UC Global Health Institute

Mission: To lead the world in research, education, and policy to coupled health-environment challenges

• COE Leadership Team:
  Co-Directors: Drs. Woutrina Smith, UCD & David Lopez-Carr, UCSB; Associate Directors: Drs. Nancy Suski, LLNL, Samantha Ying, UCR, Federico Castillo, UCB

• Initiatives (Teaching, Research, Outreach):
  ✓ Farming in the 21st Century
  ✓ Vulnerable Populations
  ✓ Building the economic case for planetary health
  ✓ Women at the center of planetary health solutions

Goal 4: Advance the well-being of animals and people in California and around the globe
Goal 4: Advance the well-being of animals and people in California and around the globe

Partnerships with California Department of Food and Agriculture

Lab Locations
- Davis
- Turlock
- Tulare
- San Bernardino
Western Institute of Food Safety and Security

- Medical ecology of microbial contamination of the US produce supply: *vertebrate pathogen sources, fate & transport, molecular epidemiology of enteric zoonoses*

Goal 4: Advance the well-being of animals and people in California and around the globe
Goal 4: Advance the well-being of animals and people in California and around the globe
GOAL 5: Ensure effective school-wide management infrastructure and sustainable financial resources

SVM Revenue Projection 2016-17

Total Revenues = $248,890,000 (All Funds)

- State Funds & Tuition: $71,214
- Indirect Cost Return: $64,043
- Professional Fees: $6,856
- CMSF: $8,603
- Income, Recharge, VMTH Clinical Income: $2,033
- Current Use: $19,642
- Gifts/Other: $76,500
- Extramural Funds: $76,500

Total Core Funds = $79.5M

Core Funds = State Funds/Tuition, ICR, and Professional Fees
Goal 5: Core Funds – Academic Departments 2016-17

Total: $37.33M
47% of core funds

Core Funds = State Funds/Tuition, ICR, and Professional Fees
Goal 5: Core Funds – VMTH and Centers, 2016-17

VMTH & Centers = $24.07M
30% of Core Funds

Core Funds = State Funds/Tuition, ICR, and Professional Fees
Goal 5: Core Funds – VMDO, 2016-17

VMDO = $18.11M
23% of Core Funds

Core Funds = State Funds/Tuition, ICR, and Professional Fees
Goal 5: 2017-18 Budget Reductions – State Funds & ICR

Total Permanent Reductions of State Funds and ICR = $1.44M

- Departments: 892,297, 62%
- Centers: 297,733, 21%
- VMTH: 200,824, 14%
- VMDO: 48,019, 3%

Total Permanent Reductions of State Funds and ICR = $1.44M
Goal 5: 2017-18 Budget Reductions – State Funds & ICR

**State Funds Reductions $1.182M**
- Departments: $763,986, 65%
- VMDO: $120,533, 10%
- VMTH: $297,733, 25%

**ICR Reductions $257K**
- Departments: $128,311, 50%
- Centers: $80,291, 31%
- VMDO: $48,019, 19%

Legend:
- Departments
- VMDO
- VMTH
Goal 5: University Investments in SVM 2012-2017

Selected University Investments to SVM Beyond State Funds and Tuition since 2012

- Over $10 million for Primate Center facilities and programs.
- $3 million recurring (base) investments for research animal care services and a new cage wash facility.
- Commitment of $25 million for VMC Site Prep and Utilities.
- ~$25 million in Veterinary Medicine Student Services and Administration Building and new Scrubs Café.

- $4.9 million in graduate student support via Office of Graduate Studies.
- ~$739K from central campus through the GSR Fee Remission & GSHIP buy downs.
- HIP hire starting in 2017-18; annual salary and benefits ~$143,000 and additional reserved for startup and recruitment support (TBD).
- $500,000 to SVM Dean for reappointment in 2016.
# Goal 5: Key Investments in 2016-17

<table>
<thead>
<tr>
<th>Project</th>
<th>Investment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Start-Up Packages</td>
<td>$2.56M</td>
</tr>
<tr>
<td>Faculty research bridge funding and seed grants</td>
<td>$440K</td>
</tr>
<tr>
<td>Vet Med Admin Building (move, IT, punch list)</td>
<td>$200K</td>
</tr>
<tr>
<td>VMTH Supplemental Allocations (equipment, timekeeping system, strategic planning)</td>
<td>$304K</td>
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<tr>
<td>VHIS (VMACS) Project</td>
<td>$350K</td>
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<tr>
<td>ACCD Research Project Matches</td>
<td>$309K</td>
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# Planned Investments for 2017-18

<table>
<thead>
<tr>
<th>Project</th>
<th>Investment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Start-Up Packages</td>
<td>$2M</td>
</tr>
<tr>
<td>Teaching Facilities Updates (MPT, Gourley, Valley)</td>
<td>$1M</td>
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<tr>
<td>PET Scan</td>
<td>$534K</td>
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<tr>
<td>ACCD Research Project Matches</td>
<td>$250K</td>
</tr>
<tr>
<td>VHIS (VMACS) Project</td>
<td>$200K</td>
</tr>
</tbody>
</table>
GOAL 5: Ensure effective school-wide management infrastructure and sustainable financial resources

• Veterinary Medicine Student Services and Administration Center opens as new home for student-service units, administrative offices and Scrubs Café

• Two-story, 34,000-square-ft building designed to improve communications, collaborations and operating efficiencies

• The building brings together ~ 100 veterinary school leaders and staff members, previously housed in multiple locations across campus

UCDAVIS VETERINARY MEDICINE
Leading Veterinary Medicine, Addressing Societal Needs
GOAL 5: Ensure effective school-wide management infrastructure and sustainable financial resources

Alex A. Ardans Tulare Branch Laboratory, CAHFS

- 29,000 sq. ft² of functional laboratory and administrative space for veterinary diagnostic testing adjacent to VMTRC
- Diagnostics to support food production, animal health monitoring, food safety programs and surveillance for foreign and emerging diseases
Goal 5: Veterinary Medical Center

Why Here and Why Now?
Goal 5: Veterinary Medical Center

Create the VMC while maintaining the current standard of patient care and quality of training

A 10 year master plan integrating new construction, renovation & site improvements to achieve the VMC vision
Goal 5: Livestock and Field Services Center & Large Animal Support Center

- Livestock and Field Service Center designed in consultation with Temple Grandin, PhD
- Designed for the best possible environment for livestock patient handling care and clinical teaching emphasizing modern concepts in animal welfare
Goal 5: Equine Performance Center

- Plans for a state-of-the-art arena to evaluate horses under-saddle for complete and quantitative examinations

- Equipped with high-speed motion capture cameras to help detect subtle gait abnormalities

- Gait Analysis Laboratory—kinematic analyses for objective measures of horse’s gait and efficacy of treatment of a musculoskeletal injury or disease

- Integrated force plate to determine distribution of weight bearing

- New farrier station to swiftly perform and evaluate shoeing interventions
Goal 5: All-Species Imaging Center

- The All-Species Imaging Center, staffed by the largest diagnostic imaging team in the world
- Cutting-edge of detecting, diagnosing and treating injuries
  Joining research, radiologists and clinicians to advance the care and rehabilitation of all animals.
Goal 5: Role of Development in our Mission
“At the heart of our success are our philanthropic partners”

- Engage SVM community in building relationships with grateful clients and long-term donors
- Leverage the veterinary hospital to generate interest in school and its programs with donors
- Establish clear, focused programmatic goals to facilitate fundraising and support research that advances clinical medicine

For your consideration, gift options to help the School of Veterinary Medicine
Goal 5: Impact of Development in our Mission

- **Gifts to date** (May 15, 2017)-FY 2016-2017
  - Total dollars raised: **$50,02,454 from 4,229 donors**
  - 79 gifts of $50,000-$499,999
  - 4 gifts of $500,000-$999,999
  - 10 gifts of $1,000,000-$4,999,999
  - 2 gifts of $5million or more

- **17 Alumni/Donor-focused events**
  - 4 alumni receptions: over 250 attendees
  - 3 UCD Foundation partnered events: over 300 attendees
  - 3 SVM events: over 660 attendees
  - 7 salons/special events: over 330 attendees

- **$6,600,000 in estate gifts** since July 2016

- **Online giving:** **$208,727** from 1,236 donors, average gift of **$168.87**
Goal 5: Impact of Development in our Mission

• **Hyemi Sevening, New** Assistant Dean for Advancement
  • **$10M** bequest expectancy for canine health
  • **$3.5M** realized bequest for endowed equine reproduction
  • **$2.2M** gift for VMC and CCAH
  • **$2M** bequest expectancy to support CCAH and thoroughbred research
  • **$1M** gift for feline research and equipment
  • **$850K** gift for endowed scholarship
  • **$568K** realized bequest to support PET scan

MAKE A GIFT NOW

Inspiring Stories

Leading Veterinary Medicine, Addressing Societal Needs
Goal 5: Impact of Development in our Mission

- **Tuition and Fees** -stabilized tuition & fees since 2011 - Current 1st yr cost $31,320
- **Increased Financial Aid** - through loans, grants and scholarship support - ~1/3 of all tuition returned as financial aid
- School’s scholarship endowment >$68.7 million, one of the largest in the country
- In 2017, provided $2 million in scholarships and another $4.7 million in financial aid, as well as $500 to each first-year student for computer support

Thank you
Ron Foster (Co-chair of the Dean’s Leadership Council) received the Soderquist Award in honor of the late Charles “Charley” Soderquist — a UC Davis alumnus, former chair of the UC Davis Foundation, and well-known Sacramento-area entrepreneur and philanthropist.

The award recognizes exceptional volunteer leadership and support of philanthropy at UC Davis, and honors volunteers who have made a significant and lasting impact on the university.

Award given at UC Davis Foundation Board Meeting in May.
Goal 5: Communications and Marketing Activities

- **Strategic Themes**:
  - Vet Med Center – Vision, Equine Performance Center, etc.
  - One Health, Infectious Disease, etc.
  - Excellence/Achievements - Teaching, Research, Service, Faculty, Students, Staff

- **Major stories** – EQ PET Scan, HCM new drug, Stem Cell Potential for Cats/Human

- Responded to 330 **Media Inquiries** & 575 Internal Communication Requests

- 300+ posts to **News & Events web page**

- Robust **Social Media** – FB= 54,000 (up 31.5%); Instagram = 13,000 (up 333%), Twitter=14,500(up 16%)

- **UCD One Health Blog** (initiated by SVM)
Goal 5: Communications and Marketing Activities

- **Coordinated Publications** - Advance, Heartbeat, CCAH Update, CEH Horse Report, Horizons
- **Videos** – 100% increase for PR, Social Media and VMC Donor Cultivation
- **Kiosk Project** – to promote achievements, expertise, activities, SVM team, VMC, etc.
- **Campus Promotions** – Airport Advertising, Chronicle of Higher Ed, Politico Playlist, NCAA Basketball Coverage, One Health
GOAL 6: Recruit, Retain and Cultivate Excellent and Productive Faculty and Staff

- Central Services Receives Kimberly-Clark “Greenovation” Award
  - Team, led by Patrick Van Dyke, with lab teams

- Staff Assembly scholarships - Truc Cao (Small Animal ICU) and Monica Kratochvil (Anatomic Pathology)

2016 VMTH Staff Awards
- Janette Barrango Rachel Smith Award (also retired this year)
- Sue Cox Small Animal Award, Samantha Snyder Large Animal Award
- Jason Peters Diagnostic Support Services Award
- Raymond Esquivel Client Services Award

Examples of STAR awards:
- Isabel Melo, Beau Patrette, Chris Brandt – outstanding service in IT
- Rob Corcoran – outstanding service in project and facilities
- Kaylie Kingston – outstanding service -Western Teaching Academy
- Rob Warren – outstanding service -VMTH Picnic Day activities
- Monique Peyton Perez, Julie Burges, and David Lish for outstanding service in the absence of the Hospital Administrator
Goal 6.2: Provide a Supportive Environment to Foster **Faculty & Staff Success**

- **Bill Vernau** - Academic Senate Distinguished Teaching Award For Graduate & Professional Teaching
- **Maggie Knipe** - Academic Federation Award for Excellence in Teaching
- **Chris Kreuder Johnson** – Academic Senate Distinguished Scholarly Public Service Award
- **Jim Clarke** - Student American Veterinary Medical Associate Excellence in Teaching Award
Goal 6.2: Provide a Supportive Environment to Foster Faculty & Staff Success

- **Pat Conrad** (2017) & **Sue Stover** (2016) - AVMA Lifetime Excellence in Research Award

- **Sue Stover** - University of Kentucky Gluck Hall of Fame Equine Research

- **Larry Cowgill** – Hill’s ACVECC Jack Mara Scientific Achievement Award

- **Jonna Mazet**
  - Consortium of Universities for Global Health Career Award
  - UC’s Remarkable Women Recognition
  - Alumni Achievement Award
  - Zoetis Award for Research Excellence
Goal 6.2: Provide a Supportive Environment to Foster **Faculty & Staff** Success

- **Jorge Nieto** - SVM Faculty Clinical Excellence Award

- **John Adaska** - American Association of Veterinary Laboratory Diagnosticians’ E. P. Pope Award

- **Andrea Fascetti** - AVMF/Winn Feline Foundation Research Award

- **Kate Hurley** - Maddie Hero Award, Maddie’s Fund
Goal 6.2: Provide a Supportive Environment to Foster Faculty & Staff Success

- Royal Veterinary College, University of London - MSc Veterinary Education - Linda Barter, Munashe Chigerwe, Julie Dechant, Joie Watson, Jodie Yelland

- UC Davis Schools of Medicine, Nursing and Veterinary Medicine Education Program – Inter-professional Teaching Scholars Program - Damion Genetos, Mary Lassaline, Bret McNabb, Birgit Puschner

- University of Michigan School of Medicine - Masters in Health Professions Education - Mary Lassaline

- UC Davis Health – 2016 Dean’s Team Award for Excellence, Cancer Immunotherapy Comparative Oncology Team
  - SVM members: Michael Kent, Robert Rebhun, Ellen Sparger, William Culp, Peter Dickinson, Jenna Burton, Danika Bannasch, Kevin Keel, C. Titus Brown
Goal 6.2: Provide a Supportive Environment to Foster Faculty Success – New Leaders

- **Carrie Finno** - Interim Director for the Center for Equine Health
- **Kate Hopper** - Director of Small Animal Clinical Services
- **Karl Jandrey** - Associate Dean for Student Programs
- **Jodi Westropp** – Director of Center for Continuing Professional Education
Goal 6.2: Provide a Supportive Environment to Foster Faculty Success – Honoring the Legacy

• Robert Leighton’s 100th Birthday Celebration!

• Gordon Theilen and Bill Pritchard – new books documenting their contributions to the profession

Distinguished Alumni - 2017

• Dr. Dallas Hyde – administration, research, postgraduate education and professional service

• Dr. Jonna Mazet – Superior research and teaching, improving global health

• Dr. Bill Rood – Leadership and community impact as the co-founder of Rood and Riddle Equine Hospital

• Dr. Ted Stashak – Sustained commitment to advance the education and knowledge of veterinarians

• Dr. John Stuelpnagel – Extraordinary work, entrepreneurial spirit in genomics
### New Faculty Appointments in 2016-17

- **Ben Moeller**, Assistant Professor of Clinical Analytical Chemistry (CAHFS)
- **Chen Gilor**, Assistant Professor of Small Animal Internal Medicine (VME)
- **Amir Kol**, Assistant Professor of Veterinary Clinical Pathology (PMI)
- **Isabelle Kilcoyne**, Assistant Professor of Clinical Equine Emergency Surgery and Critical Care (VSR)
- **Laura Van Winkle** -- Professor of Respiratory Toxicology (50%)/Professor-In Residence (50%) (APC)
- **Jenessa Gjeltema**, Assistant Professor of Zoological Medicine (VME)
- **Ingrid Balsa**, Assistant Professor of Clinical Small Animal Soft Tissue Surgery (VSR)
Goal 6.1: Recruit Faculty to Support Strategic Initiatives and Succession Planning

New Faculty Appointments in 2016-17 (continued)

- **Luke Wittenburg**, Assistant Professor of Developmental Cancer Therapeutics (VSR/VMB)
- **Blythe Jurewicz**, Health Sciences Assistant Clinical Professor in Community Practice (VME)
- **Ilana Halperin**, Health Sciences Assistant Clinical Professor in Community Practice (VME)
- **Daniel Hershberger** -- Health Sciences Clinical Professor in Community Practice (VME)
- **Barbro Filliquist** -- Professor of Clinical Small Animal Orthopedic Surgery (VSR)
GOAL 7: Build Strong Collaborations with Academic, Government, Agricultural and Business partners

Bovine respiratory disease scoring system for pre-weaned dairy calves

- BRD risk assessment tool, validated scoring system & App
- Identification of genomic regions associated with BRD resistance
- Veterinary student instruction in BRD diagnosis and prevention
- Research grant funding from USDA, ANR, and other sources
Antimicrobial Use and Stewardship in Food Animals

- FDA - Drugs in Feed Transitioned from Over-the-Counter (OTC) to Veterinary Feed Directive (VFD) Status – JAN 1, 2017
- Surveillance of antimicrobial use and practices for dairy calves in the San Joaquin Valley
- CDFA Antimicrobial Use and Stewardship Workgroup from SVM: Robert Atwill, Terry Lehenbauer, Bennie Osburn, Joan Rowe
- New Faculty CE Specialist Antimicrobial Stewardship – Approved for Hiring in 2017
- AVMA Committee on Antimicrobials Initiated in NOV 2016, Terry Lehenbauer representing AABP
- APLU-AAVMC Working Group to Develop Antimicrobial Resistance Curriculum Learning Outcomes and U.S. Capital Hill Briefing, Terry Lehenbauer – Working Group Member
GOAL 7: Build Strong Collaborations with **Academic**, Government, Agricultural and **Business** Partners

**Biomedical and Engineering Entrepreneurship Academy**

- School of Veterinary Medicine, School of Medicine, College of Biological Sciences, College of Engineering and UC Office of Research
- Started 2012, ~200 attendees (~40-45 SVM) - faculty, students & post-docs (teams)
- Researchers w/ leading industry executives, investors, & entrepreneurs
  - Analyzing, enhancing, communicating potential of project
  - Exploring commercialization opportunities and strategies
  - Developing a presentation pitch for your project/concept
  - Developing a network of mentors and industry connections
  - Increased patents, invention reports, & start-up companies
GOAL 7: Build Strong Collaborations with Academic, Government, Agricultural and Business partners

Innovations to Improve Surgical Outcomes

- A medical and entrepreneurial collaboration for improvements in a new, safer class of drugs important in surgery of people and animals

- **Robert Brosnan** (VSR) identified a plausible molecular mechanism of action for anesthesia drugs, to make predictions regarding new anesthetic agents

- The start-up company he formed in 2013, *Expanesthetics*, has raised over $2.25 million from investors, many of whom are affiliated with UC Davis
The Clinical and Translational Science Award One Health Alliance (COHA) consortium of 12 veterinary schools partnered through the NIH Clinical Translational Science Award (CTSA) network.

- Mission is to advance our understanding of diseases shared by humans and animals.
- Leverages expertise of physicians, research scientists, veterinarians, and other professionals to accelerate translational research.
GOAL 7: Build Strong Collaborations with Academic, Government, Agricultural and Business partners

Risks of Zoonotic Foodborne Pathogens in U.S. Organic Farming

- **Alda Pires** and team (PHR-Veterinary Medicine Extension) & Western Institute of Food Safety and Security, in collaboration with partners at FDA, Univ. of Maryland, Univ. of Minnesota, Univ. of Maine, Univ. of Georgia and Cornell University, USDA’s Agricultural Research Service and Economic Research Service.

- This data will guide an FDA national risk assessment on food safety risks from manure-based soil amendments.
GOAL 7: Build Strong Collaborations with Academic, Government, Agricultural and Business partners

Functional Annotation of the Equine Genome: An International Collaboration

- Carrie Finno, Rebecca Bellone, Cecilia Penedo and teams
- ENCODE – Encyclopedia of DNA Elements (Human and Mouse)
  - Forefront of personalized medicine
  - Discerning causes of disease
- Functional Annotation of Animal Genomes (FAANG)
  - Animal equivalent of ENCODE
  - Horse: International Collaboration with UC Davis as primary site
Challenges Faced/Facing the School

- **Student debt** and rising cost to educate veterinary students
- **State support** unlikely to be increased as substantial portion of budget and budget cuts
- **Fundraising for new Veterinary Medical Center** – largest capital project in SVM history
- **Faculty and staff salary scale, benefit costs, and gap** among peers
- **Leadership development and managing conflicts and professional behavior**
- **Balancing wellness in a high-performance environment**
- **Diversification** of students and workforce
- **Innovative ways to enhance revenue** to maintain #1 status
Opportunities and Strengths

• Exceptional **quality of faculty, staff, and students**
• **Resources and reputation** of SVM at UCD and beyond
• Strategic **planning for the future**
• **Donor funding base in California** and beyond – capacity
• **Stakeholder engagement and support** – **partnerships** to enhance mission
• **University and community support**
• **Alumni** – as network to enhance mission and connect to School
• **Societal impact of discoveries** to advance animal, human, and environmental health
Questions?