Office of Research

ANNUAL REPORT

FISCAL YEAR 2017-18





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# Greetings

The Office of Research provides support to catalyze research and technology commercialization across the campus. The 2017-2018 fiscal year marked a banner year, reaching all-time highs for extramural research funding as well as the number of startups enabled by technology developed at our university.

Earlier this year, I joined the office as Vice Chancellor for Research and I am eager to continue the momentum and global impact of the university by ensuring that we provide world-class support and services to our research community. As one of the most academically diverse campuses in the world, with multiple top globally ranked programs, we are uniquely positioned to address some of the world's most pressing challenges.

This report summarizes the research and innovation outcomes supported by our office and provides insight into our top accomplishments. For a more detailed explanation of the services that we offer and ongoing initiatives, I encourage you to visit our website at research.ucdavis.edu.



Sincerely,

# Prasant Mohapatra

Vice Chancellor for Research UC Davis



# Fiscal Year 2017-18 At a Glance

\$847

million in research funding

177

records of invention

103

patents issued

16 startups enabled





# Total Research Awards



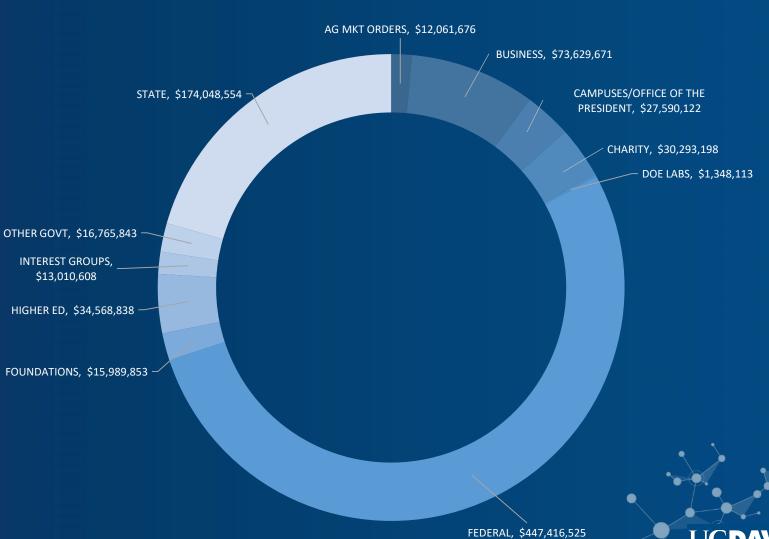




# Research Expenditures

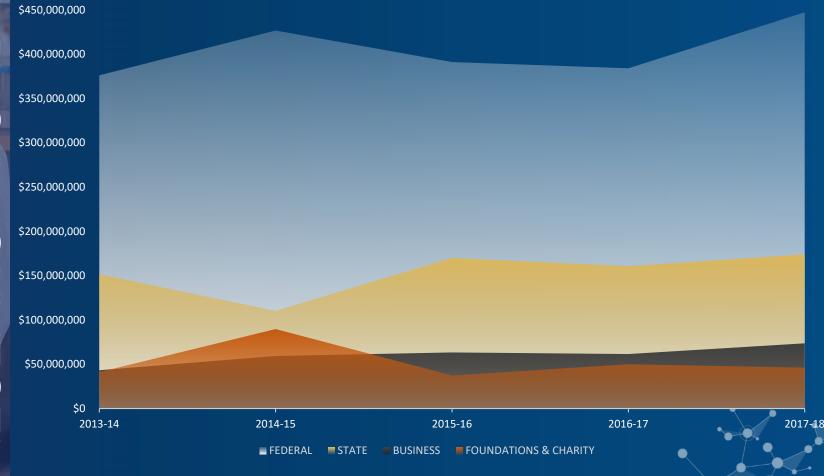
	Direct	Indirect	2018 Total	2017 Total	Variance	Variance %
Federal						
Department of Agriculture	\$22,835,844	\$4,265,106	\$27,100,950	\$30,445,253	-\$3,344,302	(10.98%)
Department of Commerce	\$164,303	\$73,906	\$238,208	\$643,200	-\$404,992	(62.97%)
Department of Defense	\$10,696,590	\$3,446,248	\$14,142,838	\$12,274,630	\$1,868,208	15.2%
Department of Education	\$65,955,150	\$1,312,756	\$67,267,906	\$62,610,375	\$4,657,531	7.4%
Department of Energy	\$8,152,234	\$3,060,205	\$11,212,440	\$12,007,251	-\$794,812	(6.62%)
Department of Health & Human Services	\$165,723,474	\$63,920,245	\$229,643,719	\$213,739,241	\$15,904,478	7.4%
NIH (included above)	\$154,796,579	\$61,059,975	\$215,856,554	\$200,177,433	\$15,679,121	7.8%
Department of the Interior	\$6,364,720	\$1,738,562	\$8,103,282	\$7,012,311	\$1,090,972	15.6%
Department of Justice	\$545,145	\$133,619	\$678,764	\$506,491	\$172,273	34.0%
Department of State	\$39,947,231	\$4,561,383	\$44,508,615	\$47,756,079	-\$3,247,464	(6.80%)
Department of Transportation	\$1,976,122	\$412,823	\$2,388,946	\$2,428,508	-\$39,563	(1.63%)
Environmental Protection Agency	\$3,516,404	\$761,707	\$4,278,111	\$4,255,521	\$22,590	0.5%
National Aeron. & Space Administration	\$2,527,016	\$1,020,104	\$3,547,120	\$4,087,543	-\$540,423	(13.22%)
National Found. of the Arts & Humanities	\$110,233	\$34,103	\$144,336	\$262,219	-\$117,882	(44.96%)
National Science Foundation	\$30,974,043	\$10,656,558	\$41,630,601	\$46,457,034	-\$4,826,433	(10.39%)
Smithsonian Institute	\$64,155	\$12,498	\$76,653	\$8,426	\$68,227	809.7%
Executive Branch	\$20,811	\$4,645	\$25,456	\$62,140	-\$36,684	(59.03%)
Legislative Branch	\$159,262	\$25,591	\$184,852	\$172,221	\$12,631	7.3%
Peace Corp	\$0	\$0	\$0	\$36,760	-\$36,760	(100.00%)
Veterans' Administration	\$308,752	\$94,061	\$402,812	\$660,670	-\$257,857	(39.03%)
Other Federal Sponsors	\$860,225	\$218,056	\$1,078,281	\$3,178,030	-\$2,099,748	(66.07%)
Total Federal	\$360,901,715	\$95,752,176	\$456,653,891	\$448,603,902	\$8,049,990	1.8%
State and Local Government						
State of California Agencies	\$97,060,576	\$13,833,142	\$110,893,718	\$103,303,809	\$7,589,909	7.4%
Local California Governments	\$9,972,623	\$1,041,078	\$11,013,701	\$9,683,782	\$1,329,919	13.7%
Total State and Local Government	\$107,033,199	\$14,874,220	\$121,907,419	\$112,987,591	\$8,919,829	7.9%
Private and Other Sponsors	\$117,720,749	\$28,432,388	\$146,153,136	\$138,587,407	\$7,565,730	5.5%
Total All Sponsors	\$585,655,663	\$139,058,784	\$724,714,447	\$700,178,899	\$24,535,548	3.5%

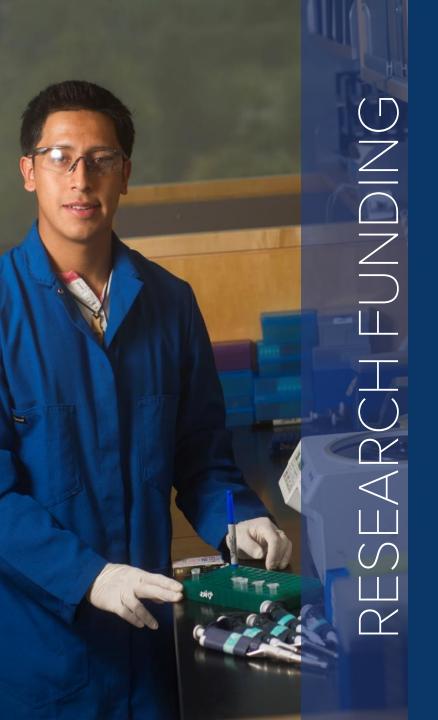
# Funding Source



# \$500,000,000

# Funding Source Trends





# Funding Source Trends

	2013-14	2014-15	2015-16	2016-17	2017-18
AG MKT ORDERS	\$8,538,629	\$9,032,569	\$9,566,503	\$11,238,628	\$12,061,676
BUSINESS	\$43,354,746	\$59,410,454	\$63,374,237	\$61,530,878	\$73,629,671
CAMPUSES/OP	\$17,236,388	\$22,541,366	\$22,163,059	\$24,543,922	\$27,590,122
CHARITY	\$26,750,563	\$23,543,424	\$23,413,792	\$29,999,154	\$30,293,198
DOE LABS	\$1,738,606	\$1,951,551	\$667,999	\$1,920,279	\$1,348,113
FEDERAL	\$376,294,046	\$426,771,819	\$391,115,786	\$384,159,347	\$447,416,525
FOUNDATIONS	\$14,320,751	\$66,120,624	\$13,965,472	\$20,071,263	\$15,989,853
HIGHER ED	\$33,756,835	\$33,963,838	\$31,229,672	\$41,140,357	\$34,568,838
INT GROUPS	\$13,073,309	\$15,994,493	\$12,217,719	\$22,209,128	\$13,010,608
OTHER GOV'T	\$17,718,976	\$15,949,649	\$22,214,773	\$25,226,695	\$16,765,843
STATE	\$151,545,327	\$110,321,518	\$170,127,838	\$160,637,144	\$174,048,554





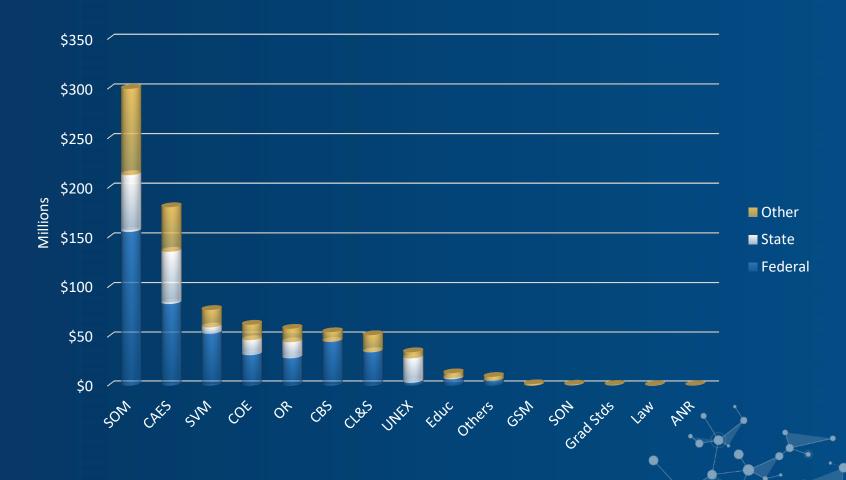
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Total Federal	\$360,901,715	\$95,752,176	\$456,653,891	\$448,603,902	\$8,049,990	1.8%



# LEICA HE'S

# Funding by College/School







# Top 10 Research Awards

# \$ 17,350,000

Jonna Mazet, *VM: One Health Institute*United States Agency for International Development
"Emerging Pandemic Threats Program 2 PREDICT-2"

# \$ 14,582,360

Susan Handy, *Inst. of Transportation Studies*California Department of Transportation
"Master Agreement for Caltrans funds to match FAST
Act USDOT UTC Grant #69A3551747114 for the
National Center for Sustainable Transportation"

# \$ 12,022,668

SEARCH

Marc Schenker, *Med: Public Health Sciences*California Department of Public Health
"Genetic Disease Screening Program"

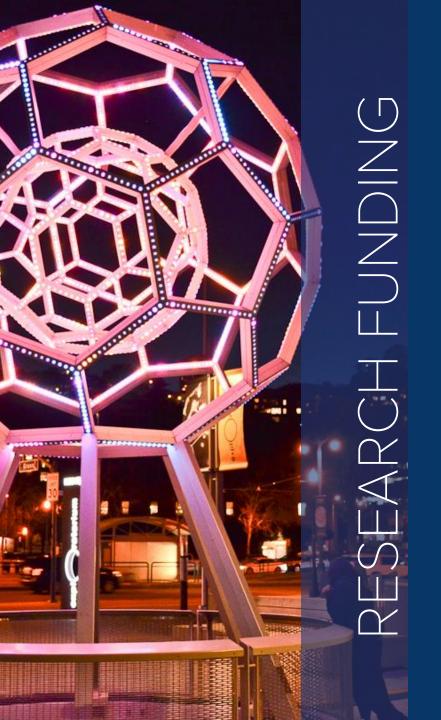
# \$ 14,695,967

Charles Decarli, *Medicine: Neurology*NIH National Institute on Aging (NIA)
"MRI Measures of Cerebrovascular Injury and AD
Atrophy in a Study of Latinos"

# \$ 14,439,491

Kenneth Kizer, *Med: Inst Population HIth Imp* California Department of Public Health "California Tobacco Control Program"





# Top 10 Research Awards

# \$ 11,000,000

David Ginsburg, *UC Calfresh Nutrition Ed Prog*California Department of Social Services
"UC CalFresh Nutrition Education Program (UC CalFresh NEP)"

# \$ 10,628,015

Cameron Carter, *Primate Center Special Rate*NIH National Institutes of Health Office of the Director
"California National Primate Research Center"

# \$ 8,640,629

Dianne Thompson, *University Extension Programs*California Department of Social Services
"Resource Center for family focused practice"

# \$ 10,993,646

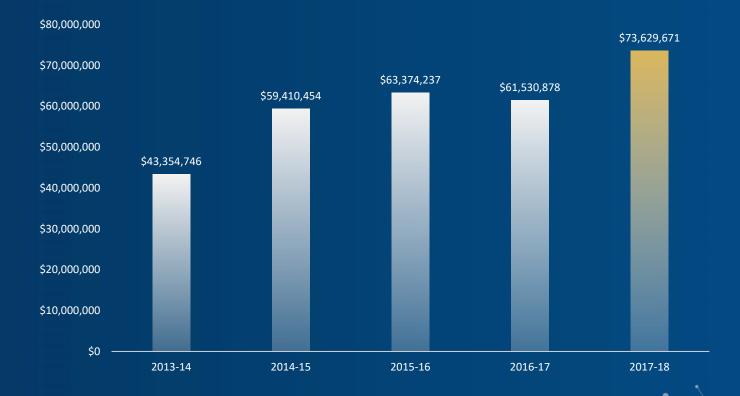
Mark Modera, Western Cooling Efficiency Ctr California Energy Commission "California Energy Product Evaluation (Cal-EPE) Hub"

# \$ 10,417,596

Susan Brooks, *University Extension*California Department of Social Services
"Northern Region Training Academy"

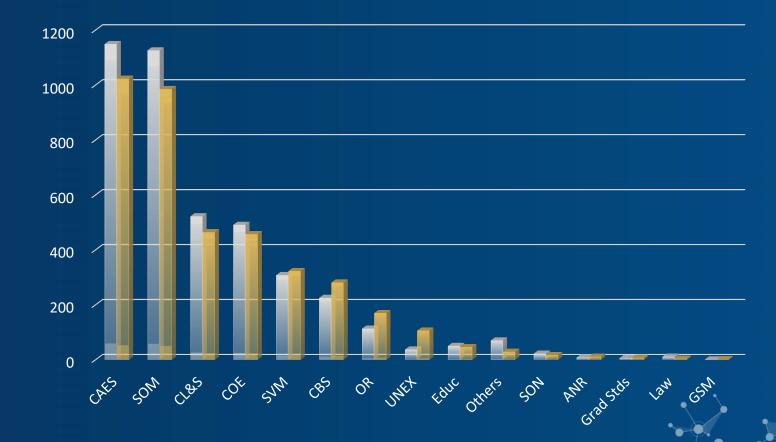


# Industry Funding Trend





# Proposals Submitted



**2016-17 2017-18** 

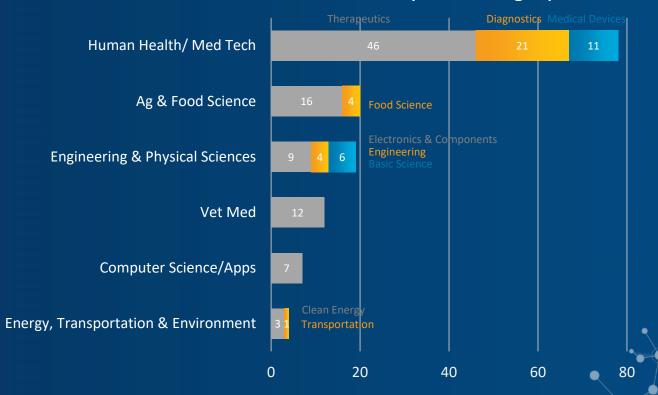




# Records of Invention

177 Records of Invention for Fiscal Year 2017-18

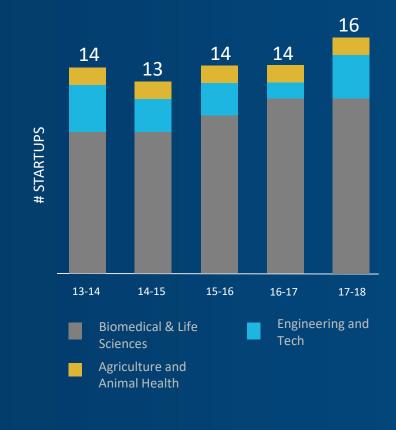
# Number of Inventions Disclosed by Sub-Category





# Startup Company Trend

16 Startup Companies Enabled
Fiscal Year 2017-18







# Startups Enabled

# Accelerated Medical Diagnostics

Commercializing companion diagnostic tests that predict cancer patient response to chemotherapy

# **ARORCA** Therapeutics

Targeting the ROR-gamma receptor for treatment of advanced cancers

# Astrid Pharma

Developing a capsid-based platform for noninvasive mucosal drug delivery

# Buto Corp.

Developing agents for treating obesity, diabetes and related disorders through Shc inhibition for rescue of fatty liver disease

# Dalmoral Pharmaceuticals

Developing drugs that protect mitochondrial function in the context of mitochondrial disease, Leber's hereditary optic neuropathy and Parkinson's disease

# Eunicera

Developing small molecular inhibitors of androgen receptor variants for treatment of advanced prostate cancer

# **Ixchel Pharma**

Developing drugs and formulations for treatment of Friedreich's ataxia, Leber's hereditary optic neuropathy and mitochondrial myopathy

## Meamer

Facilitating music-evoked autobiographical memory (MEAM) sharing and preservation for individuals and groups

## NanoHue

Commercializing a system to be used in sports through which the landing spot of a ball can be precisely identified

## Oomni

Preclinical development of oral small molecule dual Inhibitors of soluble epoxide hydrolase (sEH) and cyclooxygenase-2 (COX-2) for the treatment of cancer

# ParaMag TheraNostics

Developing novel amyloid agents targeting the diagnosis and treatment of Alzheimer's disease

# Safari Health

Commercializing software for psychosis clinics to monitor patients in between appointments and predict symptom worsening for rapid intervention

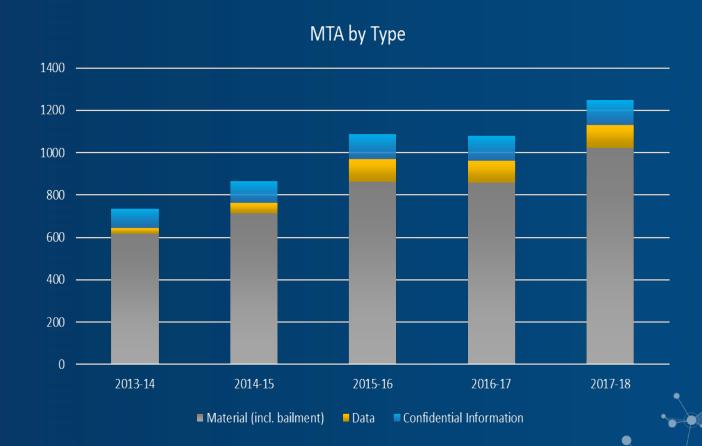
# Somos Therapeutics

Developing a cell-free, multifactor, regenerative therapeutic for multiple sclerosis, radiation-induced tissue injury, ischemic stroke and aging-related indications

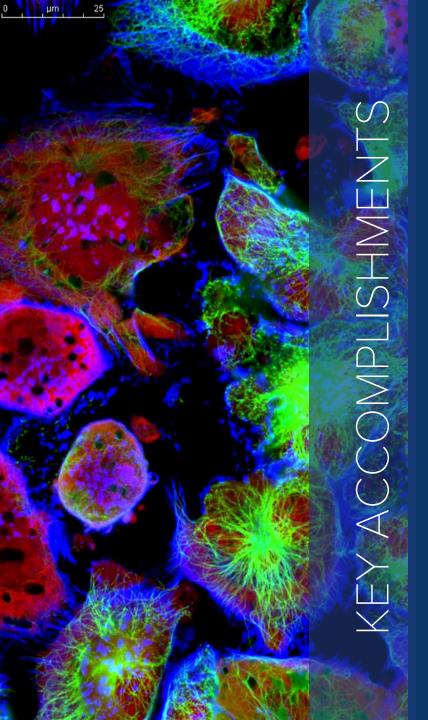
Note: Three companies have elected to remain in "stealth mode" for competitive reasons and are not listed.

# ) MME

# Material Transfer Agreements







# Research Administration and Compliance

- Achieved re-accreditation with AAHRPP for human subject research.
- Completed the development and campus wide rollout of Cayuse SP, a new online research administration tracking and approval system.
- Developed and launched Tableau dashboards which provide campus leadership with visibility into research funding activity relevant to them.
- Conducted rollout (and associated outreach and training) of the online filing and tracking system for all conflict of interest disclosures. This comprehensive system has greatly increased efficiency and eased the burden on our entire research community.
- Underwent an exhaustive internal assessment of our export control compliance program that included experts from other UC campuses.
- Hosted the annual Research Expo connecting over 500 campus researchers and staff with the resources available to help them succeed.
- Advanced global outreach showcasing research and innovation through website, social media, press releases, newsletters and events.
- Transitioned the campus animal care program from Safety Services to Office of Research.
- Continued full AAALAC Accreditation of our Research and Teaching Animal Care Program.
- Completed construction of a new state-of-the-art 9,500 sq. ft. central cage wash facility on campus.



# Interdisciplinary Research & Strategic Initiatives

- Developed new mechanisms to support interdisciplinary research, including Faculty Fellow awards to support faculty developing large-scale, multi-institutional proposals.
- Assisted with the preparation of 76 grant and contract proposals, including supporting successful renewals of a number of large existing center grants.
- Advised or engaged faculty and staff with a wide variety of research development activities including finding funding or collaborators, drafting templates or samples for specific proposals and editing proposal drafts.
- Conducted 24 presentations in the areas of grantsmanship, budgeting, and specific funding opportunities.
- Launched the Interdisciplinary Research Catalyst workshop program, fostering collaboration in areas aligned with unique and emerging strengths of UC Davis including Biophotonics, Health and the Environment, Citizen Science, and Neuroengineering.
- Partnered with Office of Global Affairs to establish and advance international institutional research partnerships with a number of organizations including the University of Sydney, CSIRO (Australia), University College Dublin (Ireland), Buildings Research Establishment (United Kingdom), University Autonoma de Guadalajara, and Tech de Monterrey (Mexico).
- Provided administrative support of 15 interdisciplinary research institutes, centers and programs, including supporting two new clusters: Microbiome Special Research Program, and Innovation Institute for Food & Health.





# Technology Management & Corporate Relations

- Enabled 177 invention disclosures (ROIs), filed 159 patent applications, issued 103 patents and executed 1,121 agreements (licenses, options, MTA, copyright, data).
- Expanded DRIVE incubator network to include new locations for Urban Hive and Inventopia and added Bayer Crop Sciences CoLaborator. Also extended collaboration with HM.CLAUSE Life Science Innovation Center.
- Expansion of proof-of-concept programs (DIAL and STAIR-Plus Pilot Grant programs).
- Participated in panels and presentations at BIO International Convention, Deshpande Symposium and California Association for Local Economic Development Annual Conference.
- UC Davis became a core strategic partner in Fund III from Osage University Partners (OUP). This arrangement allows OUP to leverage UC Davis's existing participation rights to invest in UC Davis startups.
- Advanced partnership with TechAccel including 2nd sponsored research project and contribution to STAIR for current fiscal year.
- Signed agreement with BASF for over \$1M investment in research projects and services.
- Continued support for cross-campus collaborations with Mars, Inc. and HM.CLAUSE.



# Research Core Facilities Program

- Implemented new Platform Project Management Software with KFS integration for automated billing and onboarding at four cores.
- Contributed to successful NSF and NIH instrumentation grant awards. In the NSF award, the RCFP was explicitly recognized during the peer-review as a campus organization that assures appropriate operation and maintenance. The S10 support program for core facilities developed by the RCFP was instrumental in the pending NIH S10 award for Shared Instrumentation for Animal Research program.
- Completed audit by UC Davis Audit & Advisory Management Services. The audit report was complimentary and provided recommendations to strengthen the position of the RCFP in continued development of the program. A number of Management Corrective Actions have been completed.
- Conducted development, review and analysis of Campus Research Core Facilities Annual Report.
- Collaborated in development of a new financial accounting structure for core accounts with an accompanying new financial report to better assess the current investment strategies across campus, to identify risk and to improve operations with regard to financial sustainability.
- Consulted with the college and schools deans' offices to identify future funding strategies for shared research infrastructure.







# Air Quality Research Center

Director: Anthony Wexler, Mechanical & Aerospace Engineering

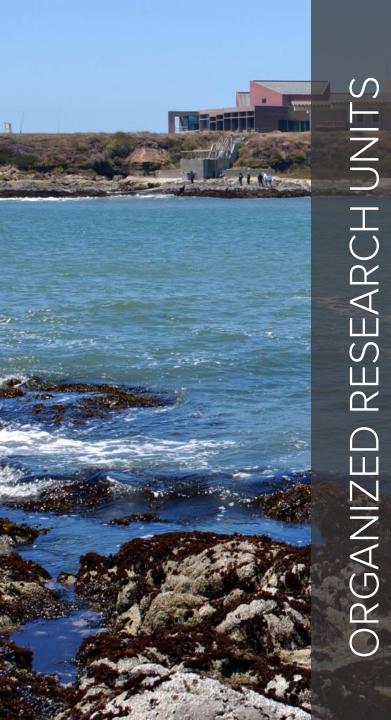
**Vision:** Inform policy to facilitate cost-effective improvements to air quality on a local, regional, state, national and global scale.

# FY 17-18 Highlights:

- Obtained a grant from the Electrical Power Research Institute on Fourier Transform InfraRed Spectroscopy for analyzing Inter-agency Monitoring of Protected Visual Environments (IMPROVE) and Chemical Speciation Network filters.
- Obtained \$700,000 California Energy Commission grant on measuring Particulate matter (PM10)
  emissions from power plant cooling towers for substituting brackish water for fresh water in these
  cooling towers
- Received an award from National Institute for Health with Veterinary Medicine for \$431,562 to study if air pollution increases the risk of Alzheimer's disease in a genetically susceptible animal model.
- Obtained a grant from the California Air Resources Board for \$400,000 to design and build a new instrument for measuring toxic metals in the atmosphere.
- Hired three faculty in the Climate Adaptation Cluster.

- Number of Affiliated Faculty: 26
- Number of Undergraduate Students: 33
- Number of Graduate Students: 2
- Number of Post Doc Scholars: 6
- Number of Colleges: 3
- Number of Departments: 4
- Publications: 33





# Coastal and Marine Sciences Institute/ Bodega Marine Laboratory

**Directors:** Richard Grosberg, Evolution and Ecology (CMSI) and Gary Cherr, Environmental Toxicology & Nutrition (BML)

**Vision:** Be a leader in advancing diverse interdisciplinary research challenges that address important questions for coastal marine science, stakeholders and the social and economic systems that depend on marine resources.

# FY 17-18 Highlights:

- Marine and Coastal Sciences Major reached 89 students.
- Successful Hiring Investment Program proposal for three positions and agreement with California Sea Grant for two positions in support of the Sustainable Marine Resources Initiative.
- Issued 21 Scholarships to students funded in part by the 102 gifts of over \$15,000 received during the campus' Give Day pledge period.
- Received NSF funds for National Research Traineeship "Sustainable Oceans: From Policy to Science to Decision."
- Completed several engagement activities including *Celebrate Marine Science*, *Science Communication Workshop*, *CMSI Professional Development Series* and our *Community Research Workshop*.

- Number of Affiliated Faculty: 187
- Number of Undergraduate Students: 1,618
- Number of Graduate Students: 102
- Number of Post Doc Scholars: 26
- Number of Colleges: 7





# California National Primate Research Center

Director: John H. Morrison, Neurology

**Vision:** Provide a regional, national, and international resource that conducts translational research on primates and provides services to the greater research community.

# FY 17-18 Highlights:

- Collaboration between the CNPRC and Stanford University found data suggesting that the arginine vasopressin (AVP) signaling pathway warrants consideration in future studies aimed at developing new drugs and diagnostics for autism. (Parker et al, Science Translational Medicine, 2018)
- A team comprised of members from all seven National Primate Research Centers demonstrated that pregnancy loss due to asymptomatic Zika virus infection may be a common but under-recognized adverse outcome in pregnant women. (Dudley et al, Nature Medicine, 2018)
- Collaboration between with the Cincinnati Children's Hospital identified a key inflammatory cascade (IL-1) in both rhesus monkeys and women that now represents a therapeutic target. (Berg et al, Journal of Nuclear Medicine, 2018)

- Number of Affiliated Faculty: 162
- Number of Undergraduate Students: 87
- Number of Graduate Students: 22
- Number of Post Doc Scholars: 23
- Number of Colleges: 5
- Number of Departments: 11
- Publications: 82





# Center for Healthcare Policy & Research

Director: Joy Melnikow, Family & Community Medicine

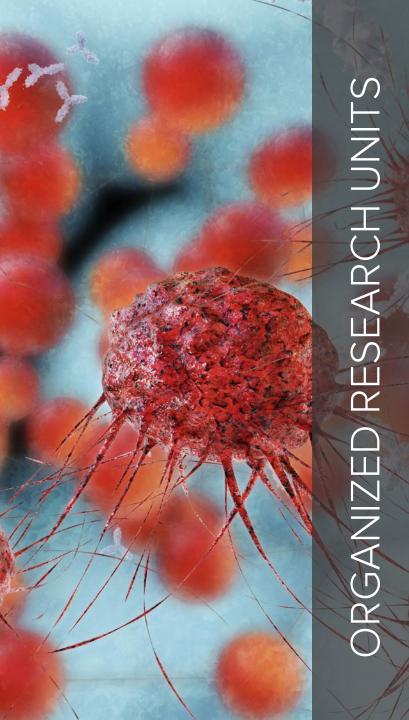
**Vision:** To facilitate research, promote education, and inform policy about health and healthcare in order to improve public health by contributing new knowledge about access, delivery, cost, quality, and outcomes related to healthcare.

# FY 17-18 Highlights:

- Implemented a total of \$9.5 million in funded awards, a 23% increase of fiscal year 16-17.
- Dr. Melnikow was appointed to the California Technology Assessment Forum (CTAF).
- CHPR sponsored a Patient-Centered Outcomes Research (PCOR) methods seminar twice per month taught by a senior and a mid-level faculty member.

- Number of Affiliated Faculty: 149
- Number of Undergraduate Students: 4
- Number of Graduate Students: 1
- Number of Post Doc Scholars: 6
- Number of Colleges: 1
- Number of Departments: 7
- Publications: 152





# Comprehensive Cancer Center

Director: Primo (Lucky) Lara, Hematology & Medical Oncology

**Vision:** Be a leader in delivering leading-edge care across the cancer continuum that is based on high-impact research advances in the biological, personal, and social factors that affect cancer risk, outcomes, and quality of life, particularly in special populations.

# FY 17-18 Highlights:

- Awarded a Project (U01) Grant in canine immunotherapy from the National Cancer Institute that builds on extensive preliminary data and novel methods for first-in-dog clinical trials which can be translated to human trials.
- The MUSE (Microscopy with UV Surface) Microscopy advanced to clinical use, which was codeveloped and patented by the Comprehensive Cancer Center and Lawrence Livermore National Laboratory.
- The Phase I Program has grown exponentially as measured by a more than doubling of the portfolio of active studies and an increase in accrual by 160% over a two year period.

# **Key Metrics**

• Number of Affiliated Faculty: 327

Number of Post Doc Scholars: 1

Number of Colleges: 4

Number of Departments: 17

Publications: 94





# Institute for Transportation Studies

Director: Daniel Sperling, Civil & Environmental Engineering

**Vision:** To serve the needs of society by organizing and conducting multidisciplinary research on emerging and important transportation issues, disseminating this research through conferences and scholarly publications, and enhancing the quality and breadth of transportation education.

# FY 17-18 Highlights:

- Secured \$1.3 million a year (\$10.4 million over 8 years) from California Legislature for ITS-Davis via SB1 for research and engagement that supports transportation decision-making by the state of California.
- Launched 3 Revolutions policy and research initiative which is gaining international recognition, with a highly successful major conference, new staff recruitments and a book by Sperling et al.
- Hosted a successful biennial conference on transportation and energy policy, with attendance by leaders from around the world and record high sponsorships.

- Number of Affiliated Faculty: 27
- Number of Undergraduate Students: 59
- Number of Graduate Students: 105
- Number of Post Doc Scholars: 9
- Number of Colleges: 5
- Number of Departments: 9
- Publications: 211





# John Muir Institute of the Environment

**Director:** Benjamin Z. Houlton, Land Air & Water Resources

**Vision:** To discover, research and solve pressing environmental and human health challenges at a time of unprecedented social connectedness, technological development and global change.

# FY 17-18 Highlights:

- Proposed two Big Ideas: OneClimate and World Water Institute
- Launched a number of new programs including:
  - Fellows Program
  - Polar Forum
  - Wild Energy
  - Scientists for Public Engagement and Knowledge (SPEAK)
- Hosted a Chancellor's Colloquium Distinguished Speaker Series with guest speaker GZA
- Jay Lund was inducted into the National Academy of Engineering
- Susan Ustin became a Fellow of the American Geophysical Union and Distinguished Professor of Environmental Resource Science

- Number of Affiliated Faculty: 137
- Number of Undergraduate Students: 1060
- Number of Graduate Students: 278
- Number of Post Doc Scholars: 44
- Number of Colleges: 6
- Number of Departments: 17
- Publications: 146





# Program in International & Community Nutrition

Interim Director: Christine Stewart, Nutrition

**Vision:** To coordinate research and training activities concerning human nutrition problems of low-income countries, and of ethnic minorities and disadvantaged groups in the United States.

# FY 17-18 Highlights:

- Co-sponsored a highly successful conference on "Aligning the Food System to Meet Dietary Needs: Fruits and Vegetables" at UC Davis together with the World Food Center and the Horticulture Innovation Lab.
- PICN faculty members in economics, nutrition and epidemiology collaborated to generate five
  potential development solutions for Haiti, at the invitation of the prestigious Copenhagen
  Consensus. Their proposal on wheat flour fortification was judged the most cost efficient of 85
  submissions, with a benefit to cost ratio of 24:1. It was ultimately ranked as second amongst a set
  of recommended priorities for the country, just behind investments in the electrical grid.

- Number of Affiliated Faculty: 20
- Number of Graduate Students: 11
- Number of Post Doc Scholars: 8
- Number of Colleges: 2
- Number of Departments: 2
- Publications: 81





# Biotechnology Program

Interim Director: Denneal Jamison-McClung, Biotechnology Program

**Vision:** To build and maintain a resilient network of industry and community stakeholders with an interest in supporting biotechnology education and outreach. With these partners, we share a long-term vision for enhancing education, innovation and entrepreneurial activity in the life science sector of the regional, national and global economies.

# FY 17-18 Highlights:

- 2nd Genome has become a new industry partner of the Biotechnology Program and has given three of our Designated Emphasis in Biotechnology students paid internships in their company.
- Expanded our ADP (Advanced Degree Program for Corporate Employees) and, as a result, three new potential students were added in the 2018-19 academic year. The three industry partners paying for their employees' fees are Bayer Crop Science, 5 Prime and Bristol Meyers Squibb.
- Fundraising efforts began in 2017 with \$1,225 given by donors
- Denneal Jamison-McClung was appointed as the Interim Director

- Number of Affiliated Faculty: 252
- Number of Graduate Students: 240
- Number of Post Doc Scholars: 2
- Number of Colleges: 7
- Number of Departments: 50





# Energy Efficiency Institute

**Interim Director:** Mark Modera, Mechanical and Aerospace Engineering & Civil and Environmental Engineering

**Vision:** To accelerate the development and commercialization of integrated energy efficiency solutions and to train future leaders in sustainable energy systems.

# FY 17-18 Highlights:

- Launched the Energy Graduate Group and successfully recruited our first class of students—53 applicants, 12 students expected in Fall.
- Made significant progress towards securing a \$3 million follow-on research grant from the Office of Naval Research that builds on our existing \$1.5 million grant.
- Completed initial collaborative efforts to launch key research and outreach projects in Mexico and India.
- Supported creation of a UC Davis team to compete in the U.S. Department of Energy's Solar Decathlon in 2017.
- Appointed Mark Modera as the Interim Faculty Director and merged the personnel of the Energy Efficiency Center and the Western Cooling Efficiency Center.
- Hosted a joint Affiliates Forum with our three affiliated research centers.
- Awarded \$11 million from the California Energy Commission to develop the California Energy Product Evaluation Hub.

- Number of Affiliated Faculty: 7
- Number of Undergraduate Students 60
- Number of Graduate Students: 13
- Number of Post Doc Scholars: 6
- Number of Colleges: 2
- Number of Departments: 2





# Feminist Research Institute

Director: Kalindi Vora, Gender, Sexuality, and Women's Studies

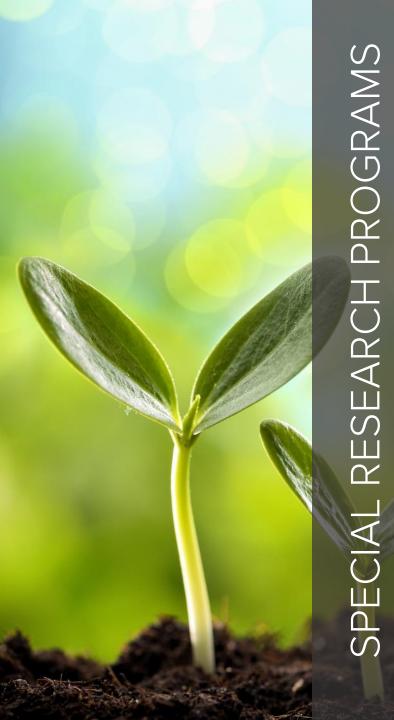
**Vision:** Realizes the potential of feminism to transform academic research to meet today's pressing social and scientific challenges. We support collaborative, transdisciplinary projects that ask new questions, use new methodologies, and engage new audiences across all disciplines.

# FY 17-18 Highlights:

- Submitted two National Science Foundation grants for Feminism & STEM (Science, Technology, Engineering & Mathematics) education
- Pilot grant on equity in transportation research from Pacific Southwest Region University Transportation Center
- Pilot grant on feminist science shop from UC Humanities Research Initiative
- Partnering with HATCH: Feminist Arts & Science Shop funded by the Mellon Foundation
- Sponsored highly-sought-after feminist scholar of diversity in higher education, Sara Ahmed, in collaboration with 19 departments, colleges, and programs including the Forums Series
- Reached over 1,500 with programming and media on theme, "What is Feminist Research?"
- Director Vora won the Rachel Carson Prize for her book Life Support: Biocapital and the New History of Outsourced Labor

- Number of Affiliated Faculty: 175
- Number of Undergraduate Students: 25
- Number of Graduate Students: 130
- Number of Post Doc Scholars: 10
- Number of Colleges: 7
- Number of Departments: 60





# Innovation Institute for Food & Health

**Director:** Justin Siegel, Chemistry

**Vision: To** accelerate deployment of products and processes that enable safe, sustainable, and secure nutrition for all.

# FY 17-18 Highlights:

- Eight projects concluding in "safe, sustainable and secure nutrition for all" program, with two arising patents and almost \$2.5M in follow-on funding (with \$1M pending)
- Three projects launched in "food and energy" program
- Pilot project ongoing in "dry chain" food processing, preservation and distribution, with \$0.8M matching funding secured
- Pilot fellowship launching with FoodShot Global for 12 month graduate student support
- New Partnerships:
  - Foundation for Food and Ag Research
  - FoodShot Global
  - Launch
  - Colorado State University's Energy Institute
  - Monticello
  - Menus for Change Culinary Institute of America

- Number of Affiliated Faculty: 20
- Number of Undergraduate Students: 3
- Number of Graduate Students: 8
- Number of Post Doc Scholars: 2
- Number of Colleges: 6
- Number of Departments: 11





# Policy Institute for Energy, Environment & the Economy

**Director:** Austin Brown, Institute for Transportation Studies

**Vision:** The Policy Institute for Energy, Environment, and the Economy exists to cultivate sustainable communities by making sound research and meaningful policy inseparable. Specifically, we:

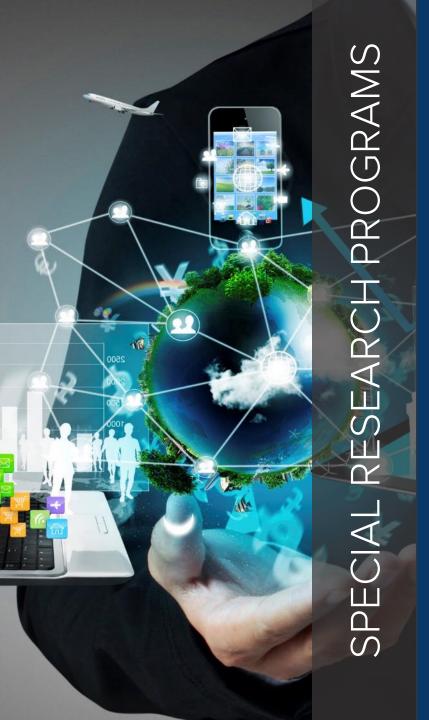
- Identify existing and new research for immediate policy needs,
- Amplify University of California expertise, efforts and resources,
- Develop ongoing relationships that connect those with questions to those with answers.

# FY 17-18 Highlights:

- Started five new research projects with researchers at the Institute of Transportation Studies
- Developed numerous working partnerships with state agencies, local leaders, key NGOs, other institutions and key companies.
- Co-hosted and helped plan the major "3 Revolutions" policy conference as well as a "Transportation Camp" at Davis, drawing more than 400 attendees total.
- Convened nine expert workshops on policy.
- Conducted eight research briefings for federal and state legislators, staff, NGOs and foundations.
- Testified as an expert witness for the California legislature (twice) and the Sacramento City Council.
- Three media interviews (Fox40, Engadget, and the Mobility Podcast).
- Spoke at eighteen major events and panels.

- Number of Affiliated Faculty: 1
- Number of Undergraduate Students: 4
- Number of Graduate Students: 5
- Number of Post Doc Scholars: 3
- Number of Colleges: 1
- Number of Departments: 1
- Publications: 9





# Center for Information Technology Research in the Interest of Society (CITRIS)

Director: Bahram Ravani, Mechanical & Aerospace Engineering

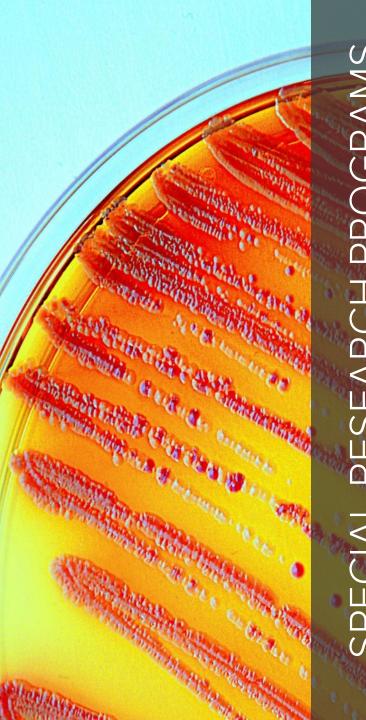
**Vision:** To create information technology solutions for society's most pressing challenges. CITRIS and the Banatao Institute at UC Davis tries to achieve its mission by developing programs and facilities that engage diversified groups of students and faculty from numerous departments and facilitate partnerships and collaborations with other northern California UC campuses as well as industrial, public and government partners.

# FY 17-18 Highlights:

- Twelve UC Davis teams received a one-time award, averaging about \$56,000 each, for
  interdisciplinary work that can lead to larger research programs and extramural grant proposals. The
  winning proposals incorporate sensors, drones, data analytics and data visualization to advance
  climate change management, civic expression through gaming, geologic hazard assessment, and
  other timely applications in healthcare, energy and agriculture. Of the successful proposals, 91% of
  lead investigators are receiving their first CITRIS Seed Grant and 73% of the projects include pretenured faculty members.
- The CITRIS and the Banatao Institute Tech for Social Good Program provides funding support to undergraduate, graduate and postdoctoral students developing hardware, software, events or programs that support healthy, sustainable, connected and equitable livelihoods in the United States and abroad.

- Number of Affiliated Faculty: 49
- Number of Undergraduate Students: 1
- Number of Colleges: 6
- Number of Departments: 31





# Microbiome Special Research Program

Director: Jonathan Eisen, Evolution & Ecology & Medical Microbiology & Immunology

**Vision:** To elevate the status of UC Davis as a world leader in integrative microbiome work through the development of a hub to coordinate and organize efforts in microbiome research across the university.

# FY 17-18 Highlights:

- Launched website: microbiome.ucdavis.edu
- Awarded 7 proposals for seed funding. Winners include: Joanna Chiu, David Gold, Valentina Medici, Kate Scow, Erkin Seker, Andrew Whitehead, and Thomas Young.
- Created monthly microbiome newsletter containing events, upcoming funding deadlines announcements.
- Hosting monthly Microbiome AMA's (Ask Me Anything) with Professor Eisen where he does Q&A
  about microbiome research at various locations in collaboration with other departments across
  campus.
- Started the "Microbiome Spotlight" which is a series profiling and highlighting research done by junior faculty, staff researchers and graduate students doing work in microbiome.

- Number of Affiliated Faculty: 11
- Number of Colleges: 7
- Number of Departments: 11

