# SOMOR SCHOOL Office of Research

### **Research Awards Announced**











Long COVID Seed Grant Program: On April 11, interim dean of the School of Medicine, Susan Murin, announced the awardees of the school's new Long COVID Seed Grant Program to help fund investigations of the clinical and pathophysiological aspects of Long COVID. Award recipients will each receive \$30,000 in total costs for a 12-month period beginning May 1, 2022, to support research-related expenses. Read more

The awardees are:

- Mark Avdalovic, professor and vice chair, Department of Internal Medicine
- Kim Barrett, vice dean for research at the School of Medicine and distinguished professor in the Department of Physiology and Membrane Biology
- Hiba Hamdan, assistant clinical professor, Department of Internal Medicine, Division of Nephrology
- C. Kent Lloyd, professor in the Department of Surgery and director of the UC Davis Mouse Biology Program
- Toby Steele, associate professor in the Department of Otolaryngology

**Cultivating Team Science Award:** The School of Medicine announced the 2022 awardees of its Cultivating Team Science seed grant program. The grants are awarded for collaborative science projects for which the lead principal investigators are School of Medicine faculty and the team represents at least two different School of Medicine departments.

The awardees are:





- David Segal, professor of biochemistry and pharmacology and affiliate of the UC Davis MIND Institute and Genome Center
- Aijun Wang, professor of surgery, vice chair for Translational Research, Innovation and Entrepreneurship and co-director of the Surgical Bioengineering Laboratory

The Cultivating Team Science award will provide \$100,000 annually per team, totaling \$200,000 in two-year seed funds for planning, preparation, and submission of large team-based applications. Read more

### May 2022

### **School of Medicine Office of Research**

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### June is Lab Safety Month

- UC Davis Environmental Health and Safety lab safety resources
- Laboratory safety guidelines on the <u>SOMOR Safety Management</u> Team web page
- Video training on lab safety offered by the Centers for Disease Control

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## Recognition



Alicia Agnoli

Alicia Agnoli, assistant professor of family and community medicine at UC Davis School of Medicine, was honored with a 2022 Top

Ten Clinical Research Achievement Award by the Clinical Research
Forum (CR Forum). At a ceremony held in Chicago, Agnoli was also presented with the Distinguished Clinical Research Achievement
Award for creativity, innovation and novel approach that demonstrated immediate impact on the health and well-being of patients. These awards are in recognition of her remarkable work studying opioid dose tapering.



Diana Farmer

UC Davis Health Department of Surgery Distinguished Professor and Chair **Diana Farmer** is one of 11 recipients of the 2022 Harrington Scholar-Innovator Awards. The awards are given by the Harrington Discovery Institute at University Hospitals (UH) of Cleveland, Ohio. The scholar awards support a diverse set of drug discovery projects. They include grants of at least \$100,000, with the opportunity to qualify for up to \$1.1 million.



**Amy Brooks-Kayal** 

Amy R. Brooks-Kayal, professor and chair of the Department of Neurology, has been inducted as the inaugural holder of the Andrew John Gabor, M.D., Ph.D. Presidential Chair. It is named for Andrew Gabor, a national leader in epilepsy research and chair of the UC Davis Department of Neurology from 1981 to 1991. The endowed chair was created by Gabor's wife, Judith Bailey Gabor, along with her family, to support the research and development of breakthrough treatments in epilepsy and other seizure-related disorders.

### **UC Davis to Sunset Elsevier Pure**

UC Davis Health is committed to using innovative research tools and information technologies to promote collaboration among all organizational affiliates regardless of their position within the bench-to-bedside-to-population spectrum of science. One research tool utilized by UC Davis Health is the expertise portal. It has been a key component of UC Davis' mission to catalyze the application of new knowledge and techniques to clinical practice and patient care. Elsevier's expertise portal, Pure, has been the primary repository for faculty profiles and publications for many years. However, effective July 1, 2022, **UC Davis Profiles** will replace Elsevier Pure. UC Profiles is sponsored by UC Office of the President (UCOP) and we are transitioning to this portal to align with the UCOP directives.

Hosted and maintained by UC San Francisco Clinical and Translational Science Institute, **UC Davis Profiles** is part of a collaborative network on an open-source, web-based platform developed from Profiles Research Networking Software by Harvard Catalyst. Pure and UC Davis Profiles have been in concurrent use since 2016 but as of July 1, 2022, UC Davis Profiles will be the only supported platform.

Basic information for all faculty from School of Medicine, School of Veterinary Medicine, and Betty Irene School of Nursing has already been migrated to UC Davis Profiles. Once logged in, faculty can add and edit their research and publication profiles and are encouraged to do so as soon as possible.

To access UC Profiles, go to <a href="https://profiles.ucdavis.edu/search/">https://profiles.ucdavis.edu/search/</a>. For additional information and account questions, please email the UC Profiles support team directly at profiles@ucdavis.edu.

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### Feature

### **Featured Research Center: Cardiovascular Research Institute**





In 2011, an interdisciplinary team of School of Medicine faculty began development of a research center dedicated to addressing the leading cause of death in the U.S.: cardiovascular disease. Over the next few years, fostered by the School of Medicine dean's office and with the collaboration of faculty and leadership across multiple

schools, colleges and departments, this team's work led to the formation of the Cardiovascular Research Institute (CVRI). This research center now offers unprecedented opportunities for discovery and innovation by multidisciplinary teams.

Donald Bers and Nipavan Chiamvimonvat (pictured above) were among the early leaders in CVRI's formative stages. They are now the co-directors of the center.

The CVRI is built on collaboration, incorporating research teams and graduate groups across disciplines, departments and colleges. This cross-discipline focus creates an environment that fosters innovative and synergistic cardiovascular research. CVRI's "home base" in Tupper Hall creates a common space for CV researchers to share ideas, get training and participate in workshops and other forms of collaboration.

The institute enhances visibility for UC Davis' cardiovascular research and serves as a focus for extramural fundraising and development. Recent NIH funding for CVRI-affiliated principal investigators includes multi-million-dollar awards to:

- Manuel Navedo, to study coupling of vascular CaV1.2 channels in health and disease
- Ye Chen-Izu, to decipher Mechano-Chemo-Transduction pathway and function in cardiomyocytes
- Eleanora Grandi, to study human atrial fibroblast calcium signaling in atrial fibrillation.

The CVRI oversees two enabling core facility resources:

- the Cell and Molecular Biology Core, a single facility where investigators can access a range of resources and services for molecular manipulation and gene transfer purposes;
- the Microsurgery Core (Animal Model Core), which provides professional microsurgery services for rodent models.

A major focus of the CVRI is to strengthen UC Davis faculty development by offering training grants and sponsoring two fellowships. CVRI hosts a biennial cardiovascular symposium and annual retreat, along with monthly workshops and distinguished speakers, which allow for exchange of ideas and collaboration among the interdisciplinary participants. The CVRI fosters joint faculty recruitment in key areas, helping to create a bedrock of interdisciplinary research.

The CVRI continues to develop toward a more comprehensive Cardiovascular Institute that includes clinical, community and population-based components.



### Cardiovascular Research Institute

4303 Tupper Hall | One Shields Ave. Davis, CA 95616 | Ph: 530-752-9879

health.ucdavis.edu/cvri/

### Donald M. Bers, Ph.D., Co-Director

Distinguished Professor and Chair, Department of Pharmacology

Silva Chair for Cardiovascular Research

### Nipavan Chiamvimonvat, M.D., Co-Director

Roger Tatarian Endowed Professor of Cardiovascular Medicine

Associate Chief for Research, Division of Cardiovascular Medicine

### Jody L. Martin, Ph.D., Cell and Molecular Biology Core Director

Associate Adjunct Professor, Department of Pharmacology

### Yi-Je (Jay) Chen, D.V.M., Ph.D. Director, MicroSurgery Core

Assistant Professor,
Department of Pharmacology

### Seema R. Prasad

Administrative Assistant

### **CVRI Mission**

"Cardiovascular (CV) disease remains the leading cause of death and kills more people than any cause (including all cancers combined). There is unprecedented opportunity today for better understanding of the fundamental bases of CV disease and innovative precision medicine therapies via synergistic multidisciplinary research that we are poised to undertake. The goal of the CVRI is to make a difference in CV Disease from bench to bedside and back."

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### **Featured Program: Mentored Clinical Research Training Program**



The challenges of research – especially in the early career stages – can be daunting. Publishing can be hampered by a lack of access to resources, supervisory support, and time. Grant submissions and funding do not come as easily to early-stage investigators when compared to their more established peers. Opportunities for leadership roles are also less abundant.

The UC Davis Clinical and Translational Science Center (CTSC) manages a program, the Mentored Clinical Research Training Program (MCRTP), designed to help overcome these challenges. The program is specifically geared toward junior faculty, clinical and preclinical fellows, and postdoctoral scholars to provide comprehensive training and support to early-stage researchers. Since 2006, 131 alumni have completed the program. **Read this story in the January** 

2022 CTSC Connections newsletter.

### Alumni of the MCRTP ...

**Enkhmaa Byambaa,** Associate Professor, Endocrinology, Diabetes, and Metabolism

"From the MCRTP, I successfully transitioned to a K12 Career Development Award (BIRCWH) where I continued my study on a genetically-regulated prevalent risk factor for cardiovascular disease. My MCRTP training and experience helped me to obtain multiple other

research grants (the AHA mentored clinical research program award, CTSC highly innovative pilot research grant award, an industry-supported investigator initiated research grant award, and a seed grant award for international research collaborations) including my recently funded NIH R01."

**Nicholas Kenyon,** Professor, Pulmonary, Critical Care, and Sleep Medicine

"The program provided the skillset and confidence to develop a translational and clinical research program that allowed me to move some of my laboratory findings to an interventional clinical trial in severe asthma patients. I always envisioned doing this much later in my career and would

not have undertaken this research direction as an Asst. Professor without this program. I wrote and developed a parallel clinical trial of L-arginine supplementation in severe asthma during the program. I now lead the NHLBI severe asthma consortium trials at UC Davis."

Amir Zeki, Associate Professor, Pulmonary, Critical Care and Sleep Medicine

"Networking was key and remains so in the program. I currently serve as Co-IOR of the Methods course (as part of the MCRTP curriculum) and we see this all the time. The project I worked on during MCRTP is the same one I currently have funding for. That project led to multiple grants (T32, KL2, American Thoracic Society Fellowship Grant, NIH K08 award, two R03 grants, etc.) including my current R01 grant. This same work also led to multiple patent applications and the formation of a company that has been funded by private investors. This year, I will be pursuing a Phase I clinical trial to test the inhaled drug formulation we developed for the treatment of asthma.

**Misty Humphries,** Associate Professor, Department of Surgery

"For me, the best part of the program was the structure

and basics of research that were taught.
From development of a research question to advanced statistical methods, the program helped me develop a solid foundation to read and critically evaluate research and develop my own research with robust methods. Not

only did MCRTP give me a network of researchers that I could call on, but it also introduced me to mentors and colleagues that I continue to ask for help when I am thinking about new projects."

**Daniel Nishijima,** Professor and Vice Chair of Research, Emergency Medicine; Director, Emergency Medicine Research Associate Program (EMRAP)

"The most useful aspect of the program was preparation for K funding, through advancement of research, mentorship, and grant refinement. It was the first necessary step towards building a successful research career. I still use many various tools I learned through

the MCRTP, including statistical analysis, various research methodologies, and grant writing. I have since continued to build on these tools in the years after the MCRTP."

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### Message from Vice Chancellor for Research Prasant Mohapatra

Dear Colleagues,

NSF recently announced their intention to ignite innovation ecosystems through a new \$160M funding opportunity, the NSF Regional Innovation Engines (NSF Engines) Program. The program catalyzes innovation ecosystems across the United States to advance critical technologies, address societal challenges, nurture diverse talent, and promote economic growth and job creation. With the potential for each Engine to receive up to \$160 million for up to 10+ years (Type-2 award), the program supports the development of regional coalitions, spanning academia, industry, nonprofits, government, civil society, and communities of practice, to engage in use-inspired research, translation of research results to society, and workforce development.

Several UC Davis-led teams are already working on Concept Outlines related to Grand Challenges, and others are forming teams around Aggie Square, food, health and other topics of relevance to our geographical region.

This is a complex program, and teams should become familiar with the requirements for Type-1 and Type-2 proposals by reading the Broad Agency Announcement. Prospective teams should determine if their proposed Innovation Engine meets NSF's maturity levels for Type-1 or Type-2 proposals. Teams must also carefully consider the following key information:

- the mission of the NSF Engines Program goes well beyond establishing large-scale research centers such as ERCs or STCs, and may require the inclusion of several research themes;
- the region of service could span a large metropolitan area, including surrounding rural areas to multiple adjacent states;
- teams must develop a comprehensive ecosystem of collaborative partners (e.g., across government, industry, non-profits, small business, entrepreneurs, and higher education); and
- activities should drive use-inspired research motivated by region and national interests, stimulate translation of research to practice, and actively support regional workforce development for the chosen topic area.

UC Davis will be allowed to submit one LOI and full proposal as a lead institution, but we are not limited in the number of Concept Outlines allowed. The Office of Research will run a Limited Submission competition on Concept Outlines that receive NSF approval. The final decision on the selected proposal for LOI and full proposal submission will be made by the Office of the Chancellor.

We are encouraging interested PIs and teams to attend the NSF Engines events listed below:

- May 17th NSF Engines Webinar
- May 24th NSF Engines Q&A Session 1
- June 7th NSF Engines Roadshow
- June 21st NSF Engines Q&A Session 2

The Interdisciplinary Research & Strategic Initiatives unit at the Office of Research can assist you in identifying teams with similar or complementary topic areas and research themes, or with a short 30 minute consultation ahead of submitting your concept outline.

Please email strategicinitiatives@ucdavis.edu

Prasant Mohapatra
Vice Chancellor for Research
Distinguished Professor of Computer Science



**Prasant Mohapatra** 

### New Funding Opportunity: NSF Regional Engines Program

### **Key Dates**

Type-1 Awards (up to \$1M for 24 months):

- Concept Outlines: June 30, 2022 (no campus limit on submissions; promising outlines will be invited by NSF to submit letters of intent)
- Letters of Intent: August 31, 2022 (by NSF invitation only; UC Davis can select one team from those invited to submit)
- Full Proposals: September 29, 2022 (by NSF invitation only)

Type-2 Awards (up to \$160M over 10 years):

- Concept Outlines: June 30, 2022 (no campus limit on submissions; promising outlines will be invited by NSF to submit letters of intent)
- Letters of Intent: at a date to be determined in FY 2023
- Full proposals: at a date to be determined in FY 2023

### **NSF Engines Events**

- May 17th NSF Engines Webinar
- May 24th NSF Engines Q&A Session 1
- June 7th NSF
   Engines Roadshow
- June 21st NSF Engines Q&A Session 2

### Research in the News

- 'Friendly' gut bacteria may eliminate pathogens by competing for energy resources
- Discovery of cell protein that keeps Kaposi's sarcoma herpes virus dormant
- Researchers receive \$1.2 million NIH grant to study synthetic data use in health care
- UC Davis telehealth leader selected as Fulbright U.S. Scholar
- Study shows need to increase screening for unhealthy alcohol use during primary care visits
- It's not just transportation, it's health justice for patients
- School of Medicine students gain experience working on new study
- · Diabetic ulcers affect the skin, cognition and mental health
- Autism characteristics can change significantly from ages 3 to 11
- New human reference genome opens unexplored regions

### Follow UC Davis Health Research News

Get the latest UC Davis research news at this link: <a href="https://health.ucdavis.edu/ctsc/news/">https://health.ucdavis.edu/ctsc/news/</a>



Every Breath You Take: Hypoxia, NO, and Oxidative Stress

13th Annual Lung Day

Hosted by Division of Pulmonary, Critical Care, & Sleep Medicine

Date: June 17, 2022

Time: 8 a.m.-4:30 p.m.

Location: Virtual and UC Davis Alumni Center

Speaker: Serpil Erzurum, M.D., Professor and Chair, Lerner Research Institute, Chief Research & Academic Officer, Cleveland Clinic

This event is sponsored by the UC Davis School of Medicine, The Lung Center, Department of Internal Medicine, Division of Pulmonary, Critical Care, and Sleep Medicine and hosted by Drs. Angela Haczku and Elena Goncharova.

Program Questions: Chue Xiong, cvxiong@ucdavis.edu

For more information and to register

13th Annual Lung Day flyer



Angela Haczku, associate dean of translational research, is interviewed by CBS Sacramento about allergy season.



**Past SOMOR Newsletters** 

<u>Issue 1.3 – Feature story: Mental Wellbeing</u> Initiatives

<u>Issue 1.2 – Feature story: UC Davis receives</u> major grant to study women's health issues

Issue 1.1. – Feature story: Research and Initiatives for Underserved Populations



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