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2023-2024 CAMPOS Annual Report

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<https://escholarship.org/uc/item/8wk9c6dq>

Authors

O'Donnell, Thomas

Kim, Doris

Martínez-Cerdeño, Verónica

Publication Date

2024-07-01



2023 - 2024

CAMPOS

ANNUAL REPORT

Center for the Advancement of Multicultural Perspectives on Science

July 1st, 2023 - June 30th, 2024



UC DAVIS
Diversity, Equity
and Inclusion

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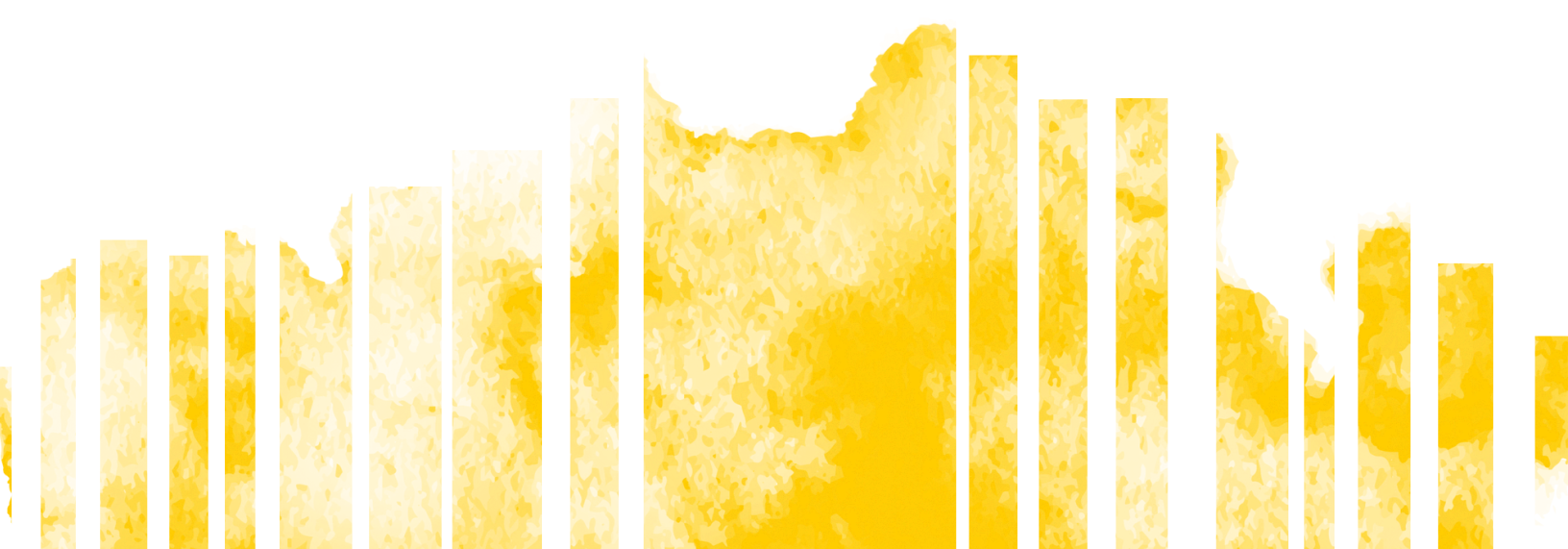
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I. CAMPOS OVERVIEW

Office of Academic Diversity and CAMPOS

The Center for the Advancement of Multicultural Perspectives on Science (CAMPOS) is part of the Office of Academic Diversity (OAD), within the Office of Diversity, Equity and Inclusion (DEI).

Leadership

Luis Carvajal-Carmona
Associate Vice Chancellor for
Academic Diversity
Professor of Biochemistry and
Molecular Medicine

Verónica Martínez Cerdeño
CAMPOS Faculty Director (interim)
Professor of Pathology and
Laboratory Medicine

Staff

Thomas O'Donnell
Principal Analyst

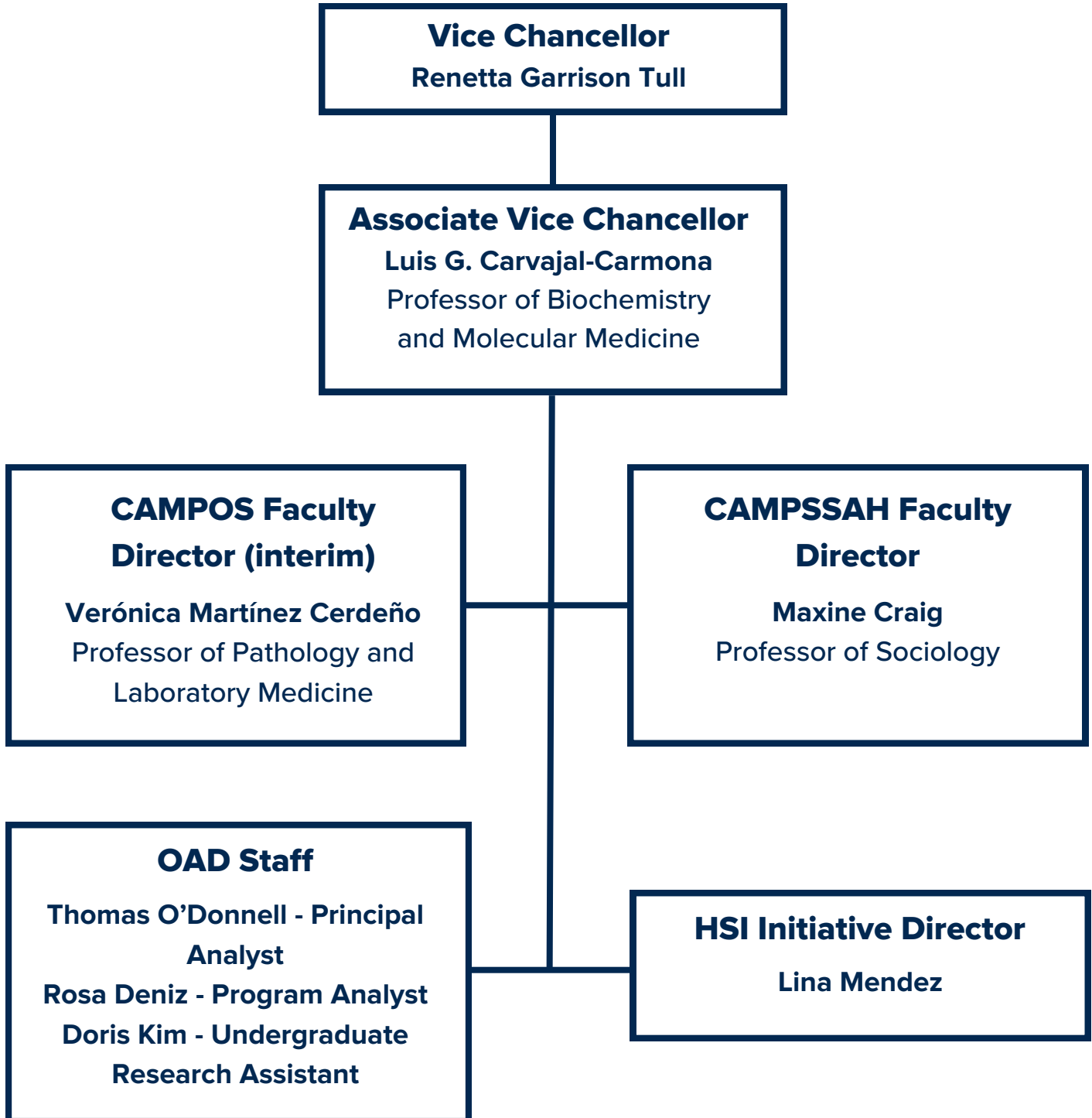
Rosa Deniz
Program Analyst

Doris Kim
Undergraduate Research Assistant



I. CAMPOS OVERVIEW

Office of Academic Diversity Organization



I. CAMPOS OVERVIEW

Associate Vice Chancellor: Luis Carvajal-Carmona



Dr. Luis Carvajal-Carmona is the Associate Vice Chancellor for Academic Diversity and a Professor of Biochemistry and Molecular Medicine at the University of California at Davis (UCD). He serves as the Center for Advancing Cancer Health Director and co-director of the Community Engagement Program at the Clinical and Translational Science Center. Nationally, Dr. Carvajal-Carmona has served as a member of the NIH CHSA Study Section, the American Association for Cancer Research (AACR) Minorities in Cancer Research Council, the AACR Minority Scholars Awards Committee (as co-Chair), the AACR Molecular Epidemiology Working Group Steering Committee, the AACR Racial Inequities Task Force and National Cancer Advisory Board Ad hoc Working Group on Strategic Approaches and Opportunities for Research on Cancer Among Racial and Ethnic Minorities and Underserved Populations.

Dr. Carvajal-Carmona obtained his Ph.D. from University College London, completed postdoctoral training at the London Research Institute (now part of The Francis Crick Institute), and was a Senior Research Fellow at the University of Oxford. He has received funding from multiple European agencies (Cancer Research UK, European Union, GSK Oncology) and the U.S. (V Foundation, California Initiative to Advance Precision Medicine, NIH). He is currently PI/MPI of grants totaling >\$25M in research funding. Dr. Carvajal-Carmona specializes in cancer genetics, epidemiology, health disparities, and global health. He has discovered multiple cancer genes and has published over 100 manuscripts in influential journals such as Nature Genetics, Gastroenterology, American Journal of Human Genetics, Lancet Gastroenterology and Hepatology, and PNAS. His main contributions to science include the elucidation of the genetic origins of Latino populations, discovering the first common variants increasing the risk of colorectal cancer, and identifying a novel familial form of gastric cancer. He has received awards and fellowships from the European Association for Cancer Research, The University of Oxford, and the V Foundation.

In addition to his passionate pursuit of scientific research, Dr. Carvajal-Carmona is a keen supporter of a diverse and inclusive biomedical research force. He was the first person from his family to attend college. Dr. Carvajal-Carmona has mentored dozens of undergraduate and graduate students, 95 % of whom have been first-generation college graduates and members of underrepresented groups. His mentees have been awarded 50+ fellowships and research awards and are all currently pursuing higher education or are employed at leading institutions and companies. In addition to the satisfaction of helping people with his research, Dr. Carvajal-Carmona's most rewarding accomplishment is to see his mentees shine and achieve their dreams. He has been awarded the UCD Chancellor's Award for Excellence in Mentoring Undergraduate Research and the UCD ADVANCE Scholar Award for outstanding scholarship and mentorship.

I. CAMPOS OVERVIEW

Interim CAMPOS Faculty Director: Verónica Martínez Cerdeño



Dr. Martínez Cerdeño received a B.S. in 1998, from Complutense University, Spain. In 2002, received her Ph.D. from Autónoma University of Madrid, Spain. After completing her doctorate in Neuroanatomy, Dr. Martinez Cerdeño did her postdoctoral training in brain development at Columbia University in New York, in stem cells at the UCSF in San Francisco, and in autism at the MIND Institute at the UC Davis Medical Center. She was presented with the prestigious CAMPOS Faculty Scholar Award, the ADVANCE award, and the Deans' Award for Excellence in Diversity.

Currently, Dr. Martínez Cerdeño serves as Professor at the Department of Medical Pathology and Laboratory Medicine at UC Davis. She is also a Faculty member at the Institute for Pediatric Regenerative Medicine, the Shriners Hospital of Northern California, and the MIND Institute. She belongs to the Biochemistry, Molecular, Cellular and Developmental Biology (BMCDB); the Molecular, Cellular, and Integrative Physiology (MCIP); the Integrated Pathophysiology; the Pharmacology and Toxicology (PTX), and the Neuroscience UCD Graduate Programs.

Dr. Martínez Cerdeño's goal is to determine the etiology and the pathology of autism and other neurodevelopmental conditions and to develop novel treatments for them. Specifically, she studies how cortical development alterations contribute to neurodevelopmental diseases including autism, Fragile X syndrome (FXS) and Fragile X-associated tremor/ataxia syndrome (FXTAS). She also studies the role of stem cells in the development, evolution, and pathogenesis of mammalian cerebral cortex.

Dr. Martínez Cerdeño's outreach activities are focused on achieving a positive diversity climate within the university and in society.

Mission Statement



Support the discovery of knowledge by promoting women in science, starting with Latina STEM scholars and expanding to all underrepresented groups in STEM through building an inclusive environment that is diversity-driven, mentorship-grounded, and career-success focused.

I. CAMPOS OVERVIEW

History

In 2012 UC Davis was awarded an ADVANCE Institutional Transformation grant from the National Science Foundation (Katehi, PI; Stanton, co-PI; Rodriguez, co-PI; McDonald, co-PI; de la Torre, co-PI). CAMPOS was launched in 2013 as a key initiative of UC Davis ADVANCE and blossomed under the helm of its founding faculty director Mary Lou de Leon Siantz, Professor Emerita at the Betty Irene Moore School of Nursing.

CAMPOS initially prioritized the hiring of UC Davis faculty whose exceptional contributions to STEM research, teaching and service, addressed issues affecting Latinas in STEM. Over time the vision grew to include all underrepresented voices with the aim to change the face of STEM science. To achieve ADVANCE's goals, UC Davis matched federal funds with an investment of over \$3 million in incentive monies to support the hiring and development of faculty who individually and collectively transform STEM education at UC Davis and contribute research and service to help solve society's vexing problems.

UC Davis extended its commitment to increase faculty diversity beyond the period of NSF funding (2012-17). Currently, CAMPOS is part of the Office of Academic Diversity (AD) within the Office of Diversity, Equity and Inclusion (DEI). In 2021 the center was overseen by Mariel Vazquez, the CAMPOS Faculty Director, by Lorena Oropeza, Associate Vice Chancellor for Academic Diversity, and by Renetta Tull, Vice Chancellor of Diversity, Equity and Inclusion. Support the discovery of knowledge by promoting women in science, starting with Latina STEM scholars and expanding to all underrepresented groups in STEM through building an inclusive environment that is diversity-driven, mentorship-grounded, and career-success focused.

Most academic diversity initiatives focus on student intervention. CAMPOS is unique in that it centers its efforts on elevating STEM faculty. The center provides opportunities to support the scholarship of CAMPOS faculty through networking, collaboration, mentorship and the development of leadership skills. Throughout the year, the center offers programming for faculty to disseminate their research, share experiences, and discuss issues of common concern. CAMPOS creates a broader community of scholars by inviting other UC Davis STEM faculty to become CAMPOS Affiliates and/or participate in many of the CAMPOS-sponsored activities. CAMPOS faculty develop team science strategies, create new collaborations, participate in teaching and training opportunities, and partner with the surrounding communities. Through their work at UC Davis, CAMPOS Faculty train and inspire the next generation of STEM scientists.

II. CAMPOS Faculty

2023 - 2024 CAMPOS Scholars

Between 2014 and 2024, forty-seven exceptional ladder-rank faculty across thirty-four science, engineering, mathematical, and medical (STEMM) disciplines have joined CAMPOS as Faculty Scholars, including the seven new faculty scholars who joined in 2023.



Daniah Beleford

Assistant Professor, Pediatrics and Physiology & Membrane Biology

Dr. Beleford's research program within the Department of Physiology and Membrane Biology and Department of Pediatrics studies molecular genetic causes of vascular anomalies - disorders of arterial, venous, and lymphatic formation. Dr. Beleford's group is interested in genetic modifiers of rare vascular conditions such as Hereditary Hemorrhagic Telangiectasia and in clarifying molecular signals and interactions that cause vascular disease. The lab utilizes mouse disease modeling and basic molecular biology techniques.



Alexander Gamero-Garrido

Assistant Professor, Computer Science

Gamero-Garrido's research focuses on the intersection of computer networking systems and public policy with an emphasis on online privacy. His work yields methodologies and analyses that provide empirical evidence on contentious questions in technology policy. He uses conventional methods from both computer networking (large-scale Internet measurements) and the social sciences (surveys). Prior to joining UC Davis, he was a Ford Foundation Post-Doc Fellow at Northeastern University. Gamero-Garrido received his Ph.D. in Computer Science from UC San Diego in 2021.

II. CAMPOS Faculty

2023 - 2024 CAMPOS Scholars



Anne Iaccopucci

Assistant Professor of teaching, Human Ecology

Iaccopucci comes to UC Davis with over 10 years of experience supporting the development of educators, children, and community-based programs. Her work is grounded in developmental theory with interdisciplinary collaborations in the fields of education and public health. Iaccopucci has led curriculum development, program design, implementation, evaluation, and has taught for several educational institutions, including the University of Agriculture and Natural Resources and the California State University of Sacramento. Her award-winning mindfulness curriculum is used nationally to support healthy social-emotional development. Iaccopucci's research interests include examining innovative educational models that may improve learning outcomes and positive behavioral changes.



Victoria Keeton

Assistant Professor, School of Nursing

Victoria Keeton is a nurse scientist with a research focus on the social causes and health consequences of stress in caregivers and children, especially in Latinx families and communities of color who experience socioeconomic disadvantage. Specifically, she studies stress as a physiologic contributor to metabolic disease and emotional dysregulation, and mechanisms of maternal-fetal programming that may predispose children to metabolic or mental health conditions. Dr. Keeton received a PhD in nursing and healthcare leadership at UC Davis. Following her doctoral training, she spent two years as a postdoctoral transdisciplinary research fellow with the UCSF California Preterm Birth Initiative. Dr. Keeton is also an advanced practice nurse with almost 20 years of pediatric clinical experience.

II. CAMPOS Faculty

2023 - 2024 CAMPOS Scholars



Felicity Muth

Assistant Professor, Neurobiology, Physiology & Behavior

Muth focuses on animal behavior and cognition, especially aspects of learning and memory that have a clear function in the natural world. Her lab works primarily with bumblebees, both in the lab and in the field. Muth carried out her undergraduate and PhD in Scotland at the University of Edinburgh and the University of St Andrews. After earning her PhD she worked on bumblebee cognition in postdoctoral positions at the University of Arizona and University of Nevada. Muth is a strong proponent of science communication in all its forms and recently wrote a children's book on bee diversity - for more info [click here](#).



Maike Sonnewald

Assistant Professor, Computer Science

Sonnewald leads the [Computational Climate and Ocean Group](#). Her work targets grand challenges to improve ocean and climate understanding and resilience. Sonnewald's interests include sea level, climate modes, basin-scale ocean dynamics, and biogeochemistry. Ultimately, she aims to improve long-range forecasts and climate projections. The impact of Sonnewalds' work spans academia and policy. It is featured in the NOAA AI strategy 2021-2025, and used in the science basis for New Zealand's Marine Protected Area legislation. She is cited by the European Parliament and the World Meteorological Organization. She is an Associate Editor for the 'Artificial Intelligence for the Earth Systems' (AIES) journal by the American Meteorological Society.

II. CAMPOS Faculty

2023 - 2024 CAMPOS Scholars



Martine Therrien

Assistant Professor, Molecular and Cellular Biology, Center for Neuroscience

Microglia are the immune cells of the brain parenchyma. They are constantly sensing and responding to the brain environment. Several microglia states have been detected in neurodegenerative diseases, such as Alzheimer's disease and Amyotrophic Lateral Sclerosis, each with a specific transcriptomic and proteomic signature suggesting essential roles in diseases. Using human stem cell models and single-cell omics, we aim to identify, track and manipulate microglia states to determine how they become awry in disease and their impact on patients' symptoms.



II. CAMPOS FACULTY

CAMPOS Faculty Scholars by College or School

College of Agricultural and Environmental Sciences

1. Maciel Hernández, Associate Professor, Human Ecology
2. Rebecca Hernandez, Assistant Professor, Land, Air and Water Resources
3. Juliana Maria Leite Nóbrega de Moura Bell, Associate Professor, Food Science and Technology
4. Fernanda Valdovinos, Assistant Professor, Environmental Science and Policy
5. Luis Diaz Garcia, Assistant Professor, Viticulture and Enology
6. Anne Iaccopucci, Assistant Professor, Human Ecology

College of Biological Sciences

7. Maria Maldonado, Assistant Professor, Plant Biology
8. Kenjiro W. Quides, Assistant Professor, Microbiology and Molecular Genetics
9. Jacqueline Barlow, Associate Professor, Microbiology and Molecular Genetics
10. Anya Brown, Assistant Professor, Evolution and Ecology
11. Rebecca Calisi-Rodriguez, Associate Professor, Neurobiology, Physiology and Behavior
12. Natalia Caporale, Associate Professor of Teaching, Neurobiology, Physiology and Behavior
13. Samuel Díaz-Muñoz, Assistant Professor, Microbiology and Molecular Genetics
14. Wilsaan Joiner, Professor, Neurobiology, Physiology, and Behavior and Neurology
15. James A. Letts, Associate Professor, Molecular and Cellular Biology
16. Mariel Vazquez, Professor, Mathematics and Microbiology and Molecular Genetics
17. Felicity Muth, Assistant Professor, Neurobiology, Physiology and Behavior
18. Martine Therrien, Assistant Professor, Molecular and Cellular Biology

School of Education

19. Alexis Patterson, Associate Professor, Elementary Science Education

II. CAMPOS FACULTY

CAMPOS Faculty Scholars by College or School

College of Engineering

- 20. Verónica L. Morales, Associate Professor, Civil and Environmental Engineering
- 21. Cindy Rubio Gonzalez, Associate Professor, Computer Science
- 22. Jasquelin Peña, Associate Professor, Civil and Environmental Engineering
- 23. Alexander Gamero-Garrido, Assistant Professor, Computer Science
- 24. Maike Sonnewald, Assistant Professor, Computer Science

Letters and Science

- 25. Alyssa Griffin, Assistant Professor, Earth and Planetary Sciences
- 26. Fernanda Ferreira, Professor, Psychology
- 27. Jairo Fúquene Patiño, Assistant Professor, Statistics
- 28. Marie Cuevas Heffern, Associate Professor, Chemistry
- 29. Jeanette Ruiz, Associate Professor of Teaching, Communication
- 30. Joseph Teran, Professor, Mathematics
- 31. Jesús M. Velázquez, Associate Professor, Chemistry
 Mariel Vazquez, Mathematics; Microbiology and Molecular Genetics

School of Medicine

- 32. Adeola Oni-Orisan, Assistant Professor, Family and Community Medicine
- 33. Kristen George, Assistant Professor, Public Health Sciences
- 34. Marco Gonzalez, Associate Professor, Neurology
- 35. Theanne N. Griffith, Assistant Professor, Physiology and Membrane Biology
- 36. Tiffani Johnson, Associate Professor, Emergency Medicine
 Wilsaan Joiner, Neurobiology, Physiology, and Behavior; Neurology
- 37. Rose Kagawa, Assistant Professor, Emergency Medicine
- 38. Anna La Torre, Associate Professor, Cell Biology and Human Anatomy
- 39. Verónica Martínez-Cerdeño, Professor, Pathology and Laboratory Medicine
- 40. Madeline Nieves-Cintrón, Assistant Professor, Pharmacology
- 41. Miriam Nuño, Professor, Biostatistics and In Residence of Surgery
- 42. Alan Lombard, Assistant Professor, Urologic Surgery; Biochemistry and Molecular Medicine
- 43. Daniah Belefrod, Assistant Professor, Pediatrics and Physiology & Membrane Biology

II. CAMPOS FACULTY

CAMPOS Faculty Scholars by College or School

School of Nursing

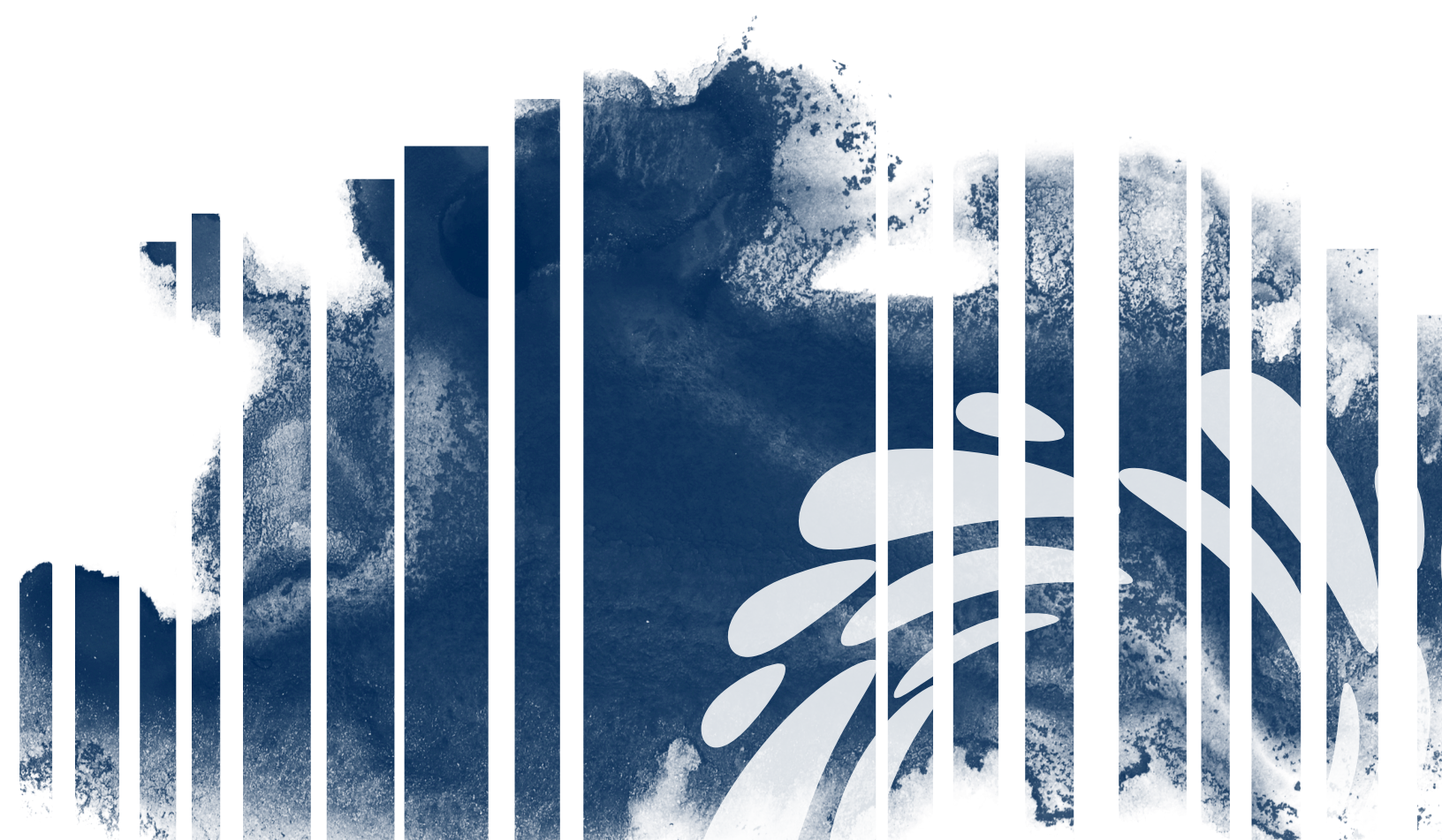
44. Victoria Keeton, Assistant Professor

School of Veterinary Medicine

45. Crystal D. Rogers, Associate Professor, Anatomy, Physiology & Cell Biology

46. Lillian Cruz-Orengo, Associate Professor, Anatomy, Physiology and Cell Biology

47. Rodolfo Urbano, Assistant Professor, Pathology, Microbiology and Immunology



II. CAMPOS FACULTY

CAMPOS Affiliate List

Agricultural and Environmental Sciences

1. Tim Beatty, Professor, Agricultural and Resource Economics
2. Dario Cantù, Professor, Louis P. Martini Endowed Chair in Viticulture and Enology
3. Diane M. Beckles, Professor, Plant Science
4. Kyaw Tha Paw U, Professor, Land Air and Water Resources
5. Samuel Sandoval Solis, Associate Professor, Land, Air and Water Resources
6. Leigh Ann Simmons, Professor, Human Ecology
7. Anne E. Todgham, Associate Professor, Animal Science

College of Biological Sciences

8. Javier Arsuaga, Professor, Molecular and Cellular Biology; Mathematics
9. Siobhan M. Brady, Professor, Plant Biology
10. Stacey Combes, Professor, Neurobiology, Physiology and Behavior
11. Marina Crowder, Professor of Teaching, Molecular and Cellular Biology
12. Jonathan Eisen, Professor, Evolution and Ecology
13. J. David Furlow, Professor, Neurobiology, Physiology and Behavior
14. Aldrin V. Gomes, Professor, Neurobiology, Physiology and Behavior; Physiology and Membrane Biology
15. Richard Grosberg, Professor, Evolution and Biology
16. Mona Monfared, Associate Professor of Teaching, Molecular and Cellular Biology
17. Gail L. Patricelli, Professor, Evolution and Ecology
18. Peter C. Wainwright, Distinguished Professor, Evolution and Ecology
19. Karen Zito, Professor, Neurobiology, Physiology and Behavior

Letters and Science

- Javier Arsuaga, Professor, Mathematics; Molecular and Cellular Biology
20. Jesús A. De Loera, Professor, Mathematics
 21. Yvette Flores, Professor, Chicana and Chicano Studies
 22. Cristina González, Professor Emerita, Spanish
 23. Susan Kauzlarich, Distinguished Professor, Chemistry
 24. Jeffrey Sherman, Professor, Psychology
 25. Dawn Y. Sumner, Professor, Earth and Planetary Sciences

II. CAMPOS FACULTY

CAMPOS Affiliate List

College of Engineering

- 26. Nina Amenta, Professor, Computer Science
- 27. Chen-Nee Chuah, Professor, Electrical & Computer Engineering
- 28. Karen McDonald, Professor, Chemical Engineering
- 29. Miguel A. Jaller Martelo, Associate Professor, Civil and Environmental Engineering

School of Medicine

- 30. Elva Díaz, Professor, Pharmacology
 - Aldrin V. Gomes, Professor, Neurobiology, Physiology and Behavior; Physiology and Membrane Biology
- 31. Jeffrey S. Hoch, Professor, Division of Health Policy and Management
- 32. Anthony F. Jerant, Professor, Family and Community Medicine
- 33. Miquell Olivia Miller, Assistant Professor, Surgery, Division of Colorectal Surgery
- 34. Kent E. Pinkerton, Professor, Pediatrics; Anatomy, Physiology and Cell Biology
- 35. John Daniel Ragland, Professor, Psychiatry and Behavioral Sciences
- 36. Luis Fernando Santana, Professor, Physiology and Membrane Biology
- 37. Colleen Sweeney, Professor, Biochemistry and Molecular Medicine
- 38. Brian Trainor, Professor, Psychology

School of Veterinary Medicine

- 39. Kent E. Pinkerton, Professor, Pediatrics; Anatomy, Physiology and Cell Biology
- 40. Esteban Soto, Professor, Medicine and Epidemiology

School of Nursing

- 41. Mary Lou de Leon Siantz, Professor Emeritus

Centers

- 42. Denneal Jamison-McClung, Director, Biotechnology Program

III. Programming

CAMPOS And CAMPSSAH Induction Ceremony

On November 8, members and supporters of CAMPOS and CAMPSSAH gathered once again at the Manetti Shrem Museum to welcome our newest faculty scholars.

Organized by the Office of Academic Diversity, the Induction Ceremony is an important opportunity to foster a community among faculty and with the campus. The Office of Academic Diversity works to strengthen and diversify the academic pipeline at UC Davis. It develops programming to advance the recruitment, retention, and promotion of faculty members whose research, teaching, and service advance multicultural perspectives in all fields of study. The office has four central goals: empowering faculty equity leaders; elevating the work of diverse faculty as they solve global problems; supporting equitable ecosystems for student opportunity; and modeling equity inclusion in higher education.

Chancellor Gary S. May began the evening by welcoming and congratulating the new faculty and emphasizing the importance of their research and their work advancing equity in higher education. Assembly member Cecilia Aguiar-Curry also participated in the ceremony and shared her commitment to ensuring California continues to support diversity at the university because it is essential to solving the wicked problems our state and society face in the coming years.



Music provided by Dinorah Klinger



Chancellor Gary May and A.V.C. for
Academic Diversity
Luis Carvajal-Carmona



CAMPOS Interim Director Verónica
Martínez-Cerdeño

III. Programming

CAMPOS And CAMSSAH Induction Ceremony

CAMPOS welcomed five new faculty:

Daniah Beleford, Assistant Professor, Pediatrics and Physiology & Membrane Biology

Alexander Gamero-Garrido, Assistant Professor, Computer Science

Anne Iaccopucci, Assistant Professor of Teaching, Human Ecology

Victoria Keeton, Assistant Professor, School of Nursing

Maike Sonnewald, Assistant Professor, Computer Science

Joining UC Davis in 2024 and to be inducted in next year's ceremony include:

Felicity Muth, Assistant Professor, Neurobiology, Physiology & Behavior

Martine Therrien, Assistant Professor, Molecular and Cellular Biology, Center for Neuroscience



From left to right: Cecilia Aguiar-Curry, Renetta G. Tull, Daniah Beleford, Maike Sonnewald, Alexander Gamero-Garrido, Victoria Keeton, Anne Iaccopucci, Phil Kass, Verónica Martínez Cerdeño, Luis Carvajal-Carmona

III. Programming

CAMPOS Research Colloquia

The goal of the CAMPOS Research Colloquia is to showcase the fantastic STEM research done by CAMPOS scholars. Through them, we continue to build a diverse UC Davis scientific community grounded on research excellence. Due to the COVID-19 pandemic, we changed our format from in person to fully online through zoom in Winter and Spring 2021. This allowed for CAMPOS Colloquia to be expand and be available for members in our community as well as those outside of UC Davis. The talks were held on from 3:10-4:00pm, via Zoom.

Victoria Keeton

November 1, 2023

“Social Determinants of Stress and Health in Latinx Mothers and Children in the U.S.”

Keeton summarizes current evidence around social needs and stressors experienced by many Latinx families in the U.S., and how they may influence the physiology and emotional health of mothers/caregivers and their children. She also discusses the implications of her research findings for clinical practice, health policy, and future research, to address structural drivers of social and health inequities in the Latinx community.

Alyssa Griffin

November 15, 2023

“Marine Sediments in a Changing Climate: Unlocking the Past and Preparing for the Future”

Griffin discusses her ongoing research at the nexus of marine sediment biogeochemistry and Earth’s changing climate. Additionally, she highlights how studying marine sediments contributes to building coastal resiliency, co-developing mutually beneficial academic partnerships, and elevating the role of the earth science community in addressing the unfolding climate crisis.

Kenjiro W. Guides

December 13, 2023

“Let the Kids Play: A Student-Centered CURE and Reflecting on Student Learning”

How do we, as instructors, optimize the learning experience for the next generation of students? Moreover, what strategies and practices can we use to close the opportunity gap that has only seemed to widen? In this Guides, discusses two broad approaches he has explored during his first year at UC Davis – curriculum development and assessment of instruction.

III. Programming

CAMPOS Research Colloquia

Daniah Beleford

January 10, 2024

“The Genetic Modifier PTPN14 Binds SMAD4 and Promotes Vascular Stability in Hereditary Hemorrhagic Telangiectasia”

The Beleford Lab seeks to decipher the role of the genetic modifier protein tyrosine phosphatase, nonreceptor, 14 (PTPN14) in BMP9-SMAD signaling and vascular malformations in Hereditary Hemorrhagic Telangiectasia (HHT). HHT is a rare Mendelian vascular condition characterized by multiple vascular malformations in different organs.

James Letts

January 24, 2024

“Emerging Understanding of Eukaryotic Respiratory Diversity”

To probe the functional and structural diversity of eukaryotic respiration, we examine the respiratory chain of diverse organisms across the tree of life. Our structural and functional studies reveal divergence in the function and composition of eukaryotic respiratory complexes, including distinct mechanisms of regulation thereby expanding our understanding of core metabolism.

Juliana Leite Nobrega de Moura Bell

February 7, 2024

“Boosting Almond Milk: Sustainable Strategies for Better Nutrition and Taste”

Despite being dominant in the US plant-based milk market, almond milk faces challenges like low protein content, gritty texture, and particle separation. This challenge has prompted our laboratory to explore the use of a sustainable water and enzyme-based co-extraction approach that allows for replacing the dispersion approach by the simultaneous extraction of proteins and lipids.

Maciel Hernández

February 21, 2024

“A Person-Centered Examination of Culturally-Relevant School Practices and Academic Functioning in Adolescence”

Schools are sites where youth might have a range of opportunities to be holistically supported through culturally-relevant practices. Using a person-centered approach, we examined the presence of profiles of culturally-relevant practices in schools among adolescents from the U.S. Southwest.

III. Programming

CAMPOS Research Colloquia

Luis Diaz-Garcia

March 6, 2024

“Grapevine Rootstock Breeding at UC Davis”

Diaz-Garcia discusses our efforts in grape breeding at UC Davis aimed at integrating greater genetic diversity into the development of new, more resilient rootstocks. He also covers the various approaches, including phenomics and genomics, that are instrumental in accelerating our breeding pipelines.

Marco Gonzalez

March 20, 2024

“Proteolysis and Epileptogenesis”

Epilepsy is a brain disorder characterized by the occurrence of seizures as a reflection of abnormal electrical activity in the brain. The focus will be on the use of rodent models of epilepsy to study the role of proteolysis on the regulation of neuronal proteins during epileptogenesis.

Alexander Gamero-Garrido

April 3, 2024

“Interactions Between the Internet & Policy: Impacts on Security, Privacy & Resilience”

The Internet is an essential service. Yet, its connecting infrastructure remains poorly understood, hampering efforts to evaluate both the resilience of the Internet as well as the security and privacy of digital communications. In this talk, Gamero-Garrido presents research approaches that he has developed at the intersection of Internet technologies and public policy.

Fernanda Ferreira and Karina Tachihara

April 17, 2024

“Multi-Utterance Language Production as Foraging”

How do speakers plan complex descriptions and then execute those plans? In this work, we attempt to answer this question by asking subjects to describe complex visual scenes while simultaneously monitoring their eye movements.

Crystal Rogers

May 15, 2024

“Neural Crest Cells are the Best Cells”

The work in Rogers’ lab focuses on understanding the molecular and cellular mechanisms that drive some of the earliest processes in vertebrate embryonic development. How do cells choose their fate?

III. Programming

2024 ADVANCE Award Symposium

About the ADVANCE Scholar Award

The ADVANCE Award Symposium celebrates the contributions made by two ADVANCE awardees and presents an opportunity for the UC Davis community to join together around the awardees' research and commitment to mentoring, social impact, and public outreach. The ADVANCE Award is available for mid-career and senior UC Davis faculty who advance diverse perspectives and gender equity in STEMM through their teaching, research and service.

The ADVANCE Award Symposium was held Wed, Apr 24, 2024 at 12:30pm - 4:30pm, and discussed technologies to improve accessibility, algorithms that prevent bias and how to involve community partners to empower marginalized groups.



Top left: Attendees discussing after presentation, Top right: Natalia Caporale, Verónica Martínez-Cerdeño, Elva Diaz
Bottom left: Elva Diaz presenting, Bottom right: Natalia presenting

III. Programming

2023 Awardees and Invited Speakers

Elva Diaz, Professor, Pharmacology

"How to change your mind: Broadening access to Neuroscience by understanding mechanisms of Brain function in Learning and Memory"



I am a professor and scientist. I lead a research program focused on understanding how the brain works and how it is impacted by disease such as Alzheimer's. I am motivated by the scientific discovery process and I aim to inspire life-long learning for undergraduate, graduate and medical students. As a native Californian born to parents originally from Mexico, I have developed a strong appreciation and respect for the benefits and advantages of a diverse population while recognizing at the same time the barriers that exist for some individuals. I am an advocate for an equitable and inclusive environment at the university.

As a young person I was inspired by the motto "A mind is a terrible thing to waste." I want students to look back at their time with me as a significant positive impact on their training and professional career success. I want people to think of me like I think of my high school biology teacher Mr. Okuda who recognized my potential and inspired me in my path of scientific discovery.

III. Programming

2023 Awardees and Invited Speakers

**Natalia Caporale, Associate Professor of Teaching,
Neurobiology, Physiology and Behavior**

**"Implementing data-informed, asset-based frameworks to
understand and promote the success of all students in STEM"**



Efforts aimed at promoting the retention and success of students from minoritized populations in STEM have traditionally followed a student-deficit approach, where students are seen as the source of the problem and thus interventions are designed to "fix" students, either by "increasing their motivation", "strengthening their academic preparation" and/or "teaching them how to succeed in the academic environment". While this approach has indeed promoted the success of the students that participated in specialized programs and interventions, they cannot be seen but as a band-aid that ignores the more systemic problems within Higher Education that make such band-aids necessary.

In this talk, I will share perspectives and findings from my research group that will encourage attendees to consider a shift to an institution/classroom-deficit paradigm that recognizes that accomplishing true inclusion in STEM (and all higher education, for that matter), requires institutional transformations that address existing discriminatory structures and policies and embrace asset-based approaches to student learning and success. Specifically, we will discuss the experiences and statistics of Latinx students on Academic Probation, studies on systemic gender gaps in upper division biology courses across several R1 institutions, how Ethnic Studies courses can support the success of all students at UC Davis and finally, we will also briefly introduce how we are working in our research group to adapting critical frameworks towards promoting the success of diverse students in STEM.

III. Programming

FOCUS Spring Workshops

Faculty of California United in Scholarship (FOCUS) advances two central goals of the UC mission: producing knowledge and advancing diversity by supporting the academic career success of UC faculty from several campuses and many disciplines whose research, service, and/or teaching focus on historically marginalized groups. FOCUS offers two-day research grant development and publication workshops, two per year over the course of three years. Providing expert research support to complete publications and submit grants is a proven way to help faculty flourish at an R1 university. In addition, this targeted intervention creates the opportunity for invited faculty to develop professional relationships around a shared commitment to producing “R1 scholarship” and advancing the UC’s diversity, equity, and inclusion goals. The research and publication success and satisfaction of such dedicated faculty must become a central concern of the university for retention reasons and to build a reliable pipeline for all professors to reach full. This intervention aims to protect the investment the university had made in underrepresented and minoritized faculty as scholars, who through their innovative research and/or service, advance the university's DEI goals.



III. Programming

FOCUS Spring Workshops

In the spring, FOCUS offered manuscript and grant proposal workshops held May 4-5, 2024 at the Latinx Research Center at UC Berkeley. For the grant proposal workshop we hosted eight faculty including six from UC Davis (five of which are CAMPOS Faculty Scholars):

1. **Alicia Rusoja, School of Education (CAMPSSAH Faculty Scholar)**
2. **Crystal Rogers, Anatomy, Physiology, and Cell Biology**
3. **María Maldonado, Plant Biology**
4. **Alexander Gamero-Garrido, Computer Science**
5. **Victoria Keeton, School of Nursing**
6. **Maike Sonnewald, Computer Science**

The workshop was a tremendous success. The energy and collective contribution to the weekend could not have been any better. Although we envision this opportunity primarily for pre-tenure and early-career faculty, Principal Investigator Lorena Oropeza made the decision to also include senior, full professors in the group and their insights were invaluable while their uncertainty still about “success” was paradoxically welcomed by the early career scholars in attendance who saw how difficult writing can be even with many years of experience.



Alicia Rusoja



Crystal Rogers



María Maldonado



Alexander Gamero-Garrido



Victoria Keeton



Maike Sonnewald

III. Programming

Enhance Grant

In 2021, the Alfred P. Sloan Foundation awarded UC Davis funding to establish the ENHANCE program to further advance diversity and increase the representation of faculty from groups underrepresented in Science, Technology, Engineering, Mathematics, and Medicine (STEMM). Faculty from underrepresented groups often experience isolation, lack of adequate support, and feel enormous pressure to prove their research excellence. In addition to recognizing these obstacles that are well-documented in the research literature, ENHANCE was inspired by the specific experiences of underrepresented STEMM faculty at UC Davis and informed by their perceptions of the greatest challenges in their efforts to advance their research careers in a timely manner. The program was further motivated by the devastating impact of the COVID-19 pandemic on research productivity and morale, particularly among early career faculty, as well as by the disproportionate effects of the pandemic on underrepresented faculty from communities and groups already hard-hit by pandemic-related inequities. ENHANCE focuses on two specific interventions that offer necessary and innovative pathways to support and enhance the careers of STEMM faculty, especially those from groups underrepresented in their disciplines, while also alleviating experiences of isolation and pressure. In so doing, the grant contributes to building a stronger and more inclusive community of STEMM researchers.

Goals and Interventions

The goal of the ENHANCE program is to advance faculty diversity in STEMM by facilitating and promoting excellence in research through two targeted interventions at UC Davis:

Dedicated Research Development Specialist: To provide our faculty with individualized professional research development support and to help them streamline the grant-writing process in order to increase their proposal output and success rates, we have recruited and hired a professional Research Development Specialist (RDS) who has worked extensively over the course of more than two decades with early career and underrepresented faculty on grant development and writing. In addition to facilitating grant-writing workshops and providing individualized strategic guidance, coaching, and feedback on ENHANCE faculty grant proposals, the RDS will be a liaison to the Office of Research. The RDS will work closely with the PIs and other campus leaders to help identify and lower institutional barriers that prevent underrepresented faculty from developing and funding their research and scholarship.

Family and Dependent Care Support Mini-Grants: To alleviate the profound stresses of maintaining a full professional life as a researcher while balancing multiple familial responsibilities and providing care for others, we have created and implemented a mini-grants program with the objective of freeing up faculty time to participate in research collaborations, engage in periods of intense grant preparation, and travel to present research results at professional conferences. These grants have been especially important in helping to sustain the productivity of faculty who are working from home during the COVID-19 pandemic.

III. Programming

Enhance Grant

These interventions are necessary and innovative pathways to support and enhance the careers of STEMM faculty from groups underrepresented in their disciplines. In addition, these innovations help alleviate faculty experiences of isolation and pressure, thereby contributing to the development of a stronger and more inclusive community of STEMM researchers.

Enhance supported two grant writing workshops in May 2024 and June 2024 that supported the preparation on five grant proposals and four manuscripts. The May workshop was facilitated by Madeleine Kahn and the June workshop was led by Stephanie Etting, a Research Development Training Officer at the Proposal Development Services office. With additional support provided outside the context of the workshops, eleven CAMPOS faculty benefited from Research Development Support. We also hired Desiree Sigala, a Research Development and Administration Specialist from UC Davis Health Clinical and Translational Science Center at 50% effort from June 1 - July 31, 2024 to assist with the June 2024 writing workshop and writing the interim report.

Enhance awarded sixteen Family Support Grants to nine faculty to assist with their participation at conferences and the preparation of grant proposals.



IV. Planned Activities

Fall 2024

New Faculty Orientation and Welcome
CAMPOS Research Colloquium
CAMPSSAH/CAMPOS Writing Community
Induction Ceremony
End of Quarter Gathering
FOCUS fall workshops

Winter 2025

CAMPOS Research Colloquium
CAMPSSAH/CAMPOS Writing Community
End of Quarter Gathering

Spring 2025

CAMPOS Research Colloquium
CAMPSSAH/CAMPOS Writing Community
ADVANCE Award Symposium
FOCUS Spring Workshops
End of Quarter Gathering

