



UCDAVIS

Undergraduate Research Center

Office of Undergraduate Education

NSF LSAMP/CAMP and MURPPS Scholars Summer Research Symposium

Schedule of Events

Friday, August 23, 2019

9:00 a.m. - 2:00 p.m.

Meeting Room D, Student Community Center



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NSF LSAMP/CAMP



The National Science Foundation (NSF) Louis Stokes Alliance for Minority Participation in the Sciences (LSAMP) program is called CAMP (California Alliance for Minority Participation) and it is part of a UC systemwide alliance. The NSF CAMP Program at UC Davis aims to recruit and retain students in STEM majors, facilitate their academic success, provide professional development, and encourage their transition to graduate study. Particular emphasis is placed on evidence-based recruitment and retention strategies, and relevant research and educational experiences in support of racial and ethnic groups historically underrepresented in STEM disciplines: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders. Faculty-mentored research experiences play a large role in the program and NSF CAMP Scholars actively participate in research during the summer and throughout the academic year.

MURPPS



The Mentorship for Undergraduate Research Participants in the Physical and Mathematical Sciences (MURPPS) Program is a UC Davis undergraduate mentoring program supported by the College of Letters & Science Dean’s office. The MURPPS program is designed to increase the number of underserved students who pursue graduate studies in the physical and mathematical sciences by engaging diverse MPS students in faculty-mentored research relevant to their majors. MURPPS at UC Davis aims to recruit and retain MPS students, facilitate their academic success, provide professional development, and encourage their transition to graduate study.

NSF LSAMP/CAMP and MURPPS Scholars Summer Research Symposium Schedule of Events

Friday, August 23, 2019

Meeting Room D, Student Community Center

09:00-09:05AM	Welcome & Introductions	11:00-12:30PM	Oral Presentations, Session II
09:05-10:50AM	Oral Presentations, Session I	12:30-12:40PM	Group Photos
10:50-11:00AM	Break	12:40-1:30PM	Lunch and Close

Oral Presentations

- 09:05 AM Martin Bravo, Pharmaceutical Chemistry
How to Control the Approach of Silyl Enolates to Chiral Imines
- 09:20 AM Kaia Yellowhorse, Pharmaceutical Chemistry and Political Science
Rhodium Catalyzed C-H Insertion of Donor/Donor Carbenes
- 09:35 AM Ariana Campos, Pharmaceutical Chemistry
Mu Opioid and Dopamine Receptor Distribution in the Hippocampus
- 09:50 AM Deangelo Wooley, Physics
Scintillator Calibration with a Radioactive Source
- 10:05 AM Izaiah Ornelas, Biochemistry & Molecular Biology
*Introduction of Glucosinolate-Myrosinase Plant Defense Pathway to *Nicotiana benthamiana**
- 10:20 AM Tony Vega, Pharmaceutical Chemistry
*Optimization of Recombinant Mammalian and Fish Drug Transporter Expression in *Escherichia coli**
- 10:35 AM Madison Thompson, Chemistry
Measuring Hydrogen-Bond Accepting Ability of Organic Molecules Using ¹⁹F and ³¹P NMR Spectroscopy
- 11:00 AM Midori Huapaya-Renbarger, Mechanical Engineering
Kinematic Alignment Restores Healthy Joint Motion during Dynamic Activity
- 11:15 AM Alejandro Tenorio, Biomedical Engineering
Comparison of Mechanical and Biocompatible Properties of Alginate-based Bioinks for the 3D Printing of Osteogenic Grafts
- 11:30 AM Eroo Fabian, Mechanical and Aerospace Engineering
Energy Storage Using Second Life Battery Packs
- 11:45 AM Juan Lopez, Chemical Engineering
Charge Carrier Diffusion Properties of Hybrid Perovskites
- 12:00 PM Lajoyce Mboning, Chemistry
Synthesis, Characterization and Optimization of Gold-Coated Magnetic Nanoparticles
- 12:15 PM Roman Diaz, Mechanical and Aerospace Engineering
Turning a New Leaf with Second-Life Battery Packs
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2019 Summer Research Scholar Cohort

Listed in order of presentations

Martin Bravo

Major: Pharmaceutical Chemistry
Year: Senior
Research Program: MURPPS
Faculty Mentor: Dr. Jared T. Shaw, Chemistry
Graduate Student Mentors: Anna Lo and David Gutierrez
Research Title: How to Control the Approach of Silyl Enolates to Chiral Imines



Kaia Yellowhorse

Major: Pharmaceutical Chemistry and Political Science
Year: Senior
Research Program: MURPPS
Faculty Mentor: Dr. Jared T. Shaw, Chemistry
Graduate Student Mentor: Lucas Souza
Research Title: Rhodium Catalyzed C-H Insertion of Donor/Donor Carbenes



Ariana Campos

Major: Pharmaceutical Chemistry
Year: Senior
Research Program: MURPPS
Faculty Mentor: Dr. Jennifer Whistler, Med: Physiology & Membrane Biology
Post Doc Mentor: Dr. Terry Kremin
Research Title: Mu Opioid and Dopamine Receptor Distribution in the Hippocampus



Deangelo Wooley

Major: Physics
Year: Senior
Research Program: MURPPS
Faculty Mentor: Dr. Bob Svoboda, Physics
Post Doc Mentors: Dr. Vincent Fischer and Dr. Leon Pickard
Research Title: Scintillator Calibration with a Radioactive Source



Izaiah Ornelas

Major: Biochemistry & Molecular Biology
Year: Senior
Research Program: NSF LSAMP/CAMP
Faculty Mentor: Dr. Patrick Shih, Plant Biology
Post Doc Mentor: Dr. Ben Endelman
Research Title: Introduction of Glucosinolate-Myrosinase Plant Defense Pathway to *Nicotiana benthamiana*



Tony Vega

Major: Pharmaceutical Chemistry
Year: Senior
Research Program: MURPPS
Faculty Mentor: Dr. Sascha Nicklisch, Environmental Toxicology
Research Title: Optimization of Recombinant Mammalian and Fish Drug Transporter Expression in *Escherichia coli*



Madison Thompson

Major: Chemistry
Year: Junior
Research Program: FLCC/UC Davis Intern
Faculty Mentor: Dr. Annaliese Franz, Chemistry
Research Title: Measuring Hydrogen-Bond Accepting Ability of Organic Molecules Using ^{19}F and ^{31}P NMR Spectroscopy



Midori Huapaya-Renbarger

Major: Mechanical Engineering
Year: Junior
Research Program: NSF LSAMP/CAMP
Faculty Mentor: Dr. Maury Hull, Orthopedics and Biomechanics
Post Doc Mentor: Dr. Anne Haudenschild
Research Title: Kinematic Alignment Restores Healthy Joint Motion during Dynamic Activity



Alejandro Tenorio

Major: Biomedical Engineering
Year: Junior
Research Program: NSF LSAMP/CAMP
Faculty Mentor: Dr. Kent Leach, Biomedical Engineering
Post Doc Mentor: Dr. Tomas Gonzalez-Fernandez
Research Title: Comparison of Mechanical and Biocompatible Properties of Alginate-based Bioinks for the 3D Printing of Osteogenic Grafts



Eroz Fabian

Major: Mechanical and Aerospace Engineering
Year: Senior
Research Program: NSF LSAMP/CAMP
Faculty Mentor: Dr. Jae Wan Park, Mechanical and Aerospace Engineering
Graduate Student Mentor: Joseph Lecap
Research Title: Energy Storage Using Second Life Battery Packs



Juan Lopez

Major: Chemical Engineering
Year: Senior
Research Program: NSF LSAMP/CAMP
Faculty Mentor: Dr. Dong Yu, Physics
Graduate Student Mentor: Luke McClintock
Research Title: Charge Carrier Diffusion Properties of Hybrid Perovskites



Lajoyce Mboning

Major: Chemistry
Year: Senior
Research Program: NSF LSAMP/CAMP
Faculty Mentor: Dr. Ting Guo, Chemistry
Graduate Student Mentor: Jennifer Lien
Research Title: Synthesis, Characterization and Optimization of Gold-Coated Magnetic Nanoparticles



Roman Diaz, Jr.

Major: Mechanical and Aerospace Engineering
Year: Senior
Research Program: NSF LSAMP/CAMP
Faculty Mentor: Dr. Jae Wan Park, Mechanical and Aerospace Engineering
Graduate Student Mentor: Joseph Lecap
Research Title: Turning a New Leaf with Second-Life Battery Packs



UC DAVIS

Undergraduate Research Center

Office of Undergraduate Education

The Undergraduate Research Center (URC) at UC Davis encourages and facilitates research opportunities for UC Davis undergraduate students in all majors and class levels. We offer funding, awards and activities to support undergraduate research across the university. The URC promotes faculty-mentored research as a high-impact student experience to enhance readiness to succeed in future careers. Explore our site to discover opportunities for students and faculty.

urc.ucdavis.edu