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
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.

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
11:00-12:00PM  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  Eroz 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*
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 19F and 31P 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

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.

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