



CSUSM SUMMER SCHOLARS ORIENTATION AT VIA SAT

CSUSM Summer Undergraduate Research Newsletter

June 2016

UPCOMING SUMMER EVENTS

Summer Research is in Full Swing at CSUSM

Classes have ended but summer research has just begun at CSUSM. Summer is the time when many students and professors are free to fully concentrate on creative activities and scientific projects. Undergraduate research includes experiences doing original research while being mentored by an experienced researcher. This can take place in a formal program or on a volunteer basis. See researchers below recruiting families at a community event. There is a bustling community of undergraduate research at CSUSM!



BENEFITS OF SUMMER RESEARCH

- Better student retention and graduation rates
- Increased active participation in courses taken after a summer research experience
- Higher chances of pursuing graduate careers
- Higher grades and overall GPA

(as reviewed in Owerbach et al. 2015)

SKILLS GAINED IN SUMMER RESEARCH

Surveyed students who had participated in summer research programs reported gains on a variety of skills (Lopatto, 2007):

- design and hypothesis formation
- data collection & interpretation
- computer and information literacy
- oral and written communication
- student independence
- intrinsic motivation to learn



Ice Cream Social & Raffle Tuesday 6/21 1-3 PM in USU Commuter Lounge

ALL Undergraduate Summer Researchers are invited to an ice cream social and raffle. Get to know what others are doing on campus, have a tasty treat and win a prize!



Events Later in the Summer:
Popcorn & Games in July TBD
APA Summer Data Blitz 7/27
Summer Scholars Poster Session 8/10

WHO IS DOING SUMMER RESEARCH at CSUSM?

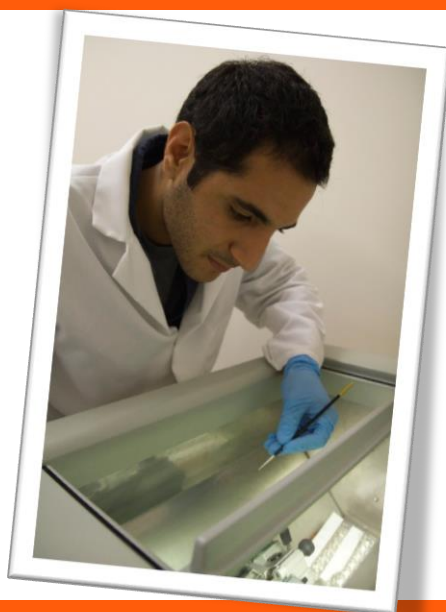
Departments participating in summer research include:

Math Psychology Economics
Business Global Studies Biology
Bio/Chemistry Biotechnology Physics
Sociology Library Computer Science
Kinesiology Political Science
Communication Library Education
NLRC Visual & Performing Arts

If your department is not listed, please contact us and tell us about your projects

COMMUNICATION PROJECT

The Rivera Team in Communication is using the latest version of NVivo software to explore pregnant Mexican American moms' stress to identify cultural nuances in health care experiences and access



PHYSICS PROJECT

The Tsui lab is working on the mathematical modeling and engineering of a magnetic coil sensor to be used to help diagnose iron in the liver

CHEMISTRY PROJECT

The Hamadani Lab is studying protein folding using single molecule fluorescence spectroscopy

KINESIOLOGY PROJECT

The Romero Lab is studying the role of risk-taking behaviors on inflammatory markers and physical and behavioral health

MATHEMATICS PROJECT

The Sharif Lab is determining the feasibility of using permutations for a fully homomorphic encryption scheme.

PSYCHOLOGY PROJECT

The Caine lab is studying animal behavior, i.e. enrichment on rehabilitating harbor seals, dogs' reactions to snake odors, and lateralized tail and limb movements in African elephants



2016 selected Summer Scholars participants at orientation at ViaSat

SUMMER SCHOLARS PROGRAM

The Summer Scholars Program is a 10-week undergraduate experience that aims to integrate STEM research and education. Students develop research skills working alongside faculty on well-defined projects addressing fundamental questions in science and learn to apply new instrumental techniques and analytical methods. The program has 21 students working in the laboratories of 15 STEM faculty at CSUSM. By connecting students' research experiences to their overall course of study, the Summer Scholars Program is helping to develop the future STEM workforce needed in our region. The Summer Scholars Program is supported by a generous gift from ViaSat, Inc.

For more information visit <https://www.csusm.edu/csm/points-of-pride/scholars/index.html>

APA SUMMER RESEARCH PROGRAM

The APA Summer Research Program is an 8 week summer research program funded by the American Psychological Association and awarded to the Psychology Department at CSUSM for 4 students with minimal experience to gain research skills in Psychology.

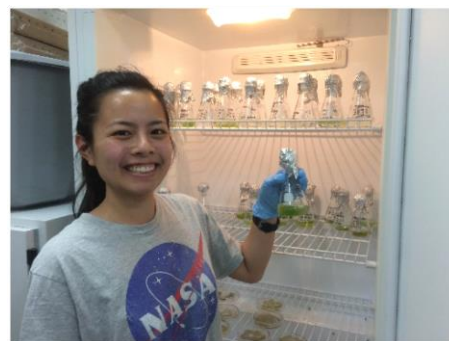
APA students will get hands on research experience in 4 active labs at CSUSM as well as professional development in the psychological sciences including psychological research methods, hypothesis development and testing, ethics of human and animal research and responsible conduct as a scientist. Each student will perform an original research project and present data in a public data blitz at end of summer.



*2016 selected APA Undergraduate
Research Program Participants
(Candice Reel, Amiel Maldonado, Victoria Olivas, Brian Voss)*

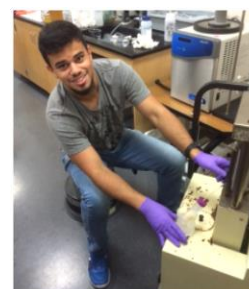
If you are interested (professor or student) in having your research featured or contributing to the July 2016 newsletter please contact the Committee for Undergraduate Research (CuGR) at kdanna@csusm.edu. We look forward to hearing about summer research experiences!

FEATURED UNDERGRADUATE RESEARCHERS



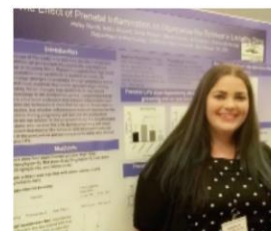
Anne Deck

Anne Deck is with Dr. Robert Sheath in Biology where she works on the isolation and taxonomy of fresh water algae. She likes the intellectual stimulation of research and has enjoyed learning about lab management. She recently isolated *Rhoicosphenia* California from the Los Penasquitos Creek.



Davi Rosa

Davi works with Dr. Jayasinghe in Biochemistry. Davi is purifying, and studying the structure and function of CsgE, a protein involved in the formation of amyloid aggregates characteristic of Type II Diabetes. He wanted to gain hands-on research experience to improve his understanding concepts he has learned in the classroom and skills and techniques he has been introduced to in labs.



Haley Norris

Haley works with Dr. D'Anna-Hernandez in Psychology. Haley has performed studies investigating the role of reward and motivation-related peptides on maternal behavior and is interested in the underlying neuromechanisms of autism and sensory processing. She says research allows her to collaborate with others and investigate topics of interest.

