Office for Training, Research & Education in the Sciences

OTRES Winter 2017 Newsletter

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OTRES Student Research Programs

The MARC U*STAR and NIGMS RISE Programs are supported by the National Institutes of Health; the LSAMP program is funded by the National Science Foundation and the California State University. These programs identify and prepare eligible students for graduate studies leading to the Ph.D. by providing research training and early scholarly experiences to high-achieving undergraduate and graduate CSUSM students.

From the Director

Dr. Keith Trujillo

I'm delighted to share the latest news about OTRES, and the impressive accomplishments of our current and former students. As always, OTRES faculty and staff are working hard to provide a supportive environment at CSUSM, one that empowers students, sets high expectations, and celebrates success.

During the 2015-2016 academic year OTRES scholars gave 85 presentations at scientific conferences and were coauthors on three publications in peer reviewed journals. In addition, following on past successes 7 OTRES scholars were selected to represent CSUSM at the CSU Statewide Research Competition, with two receiving statewide awards.

To date, 28 OTRES alumni have received PhDs and 38 are currently working on their doctorates. In addition, 71 OTRES alumni have received Master's degrees and 12 more are currently working on their degrees. Our latest cohort is currently receiving invitations for interviews at PhD programs around the country. Several alumni have been selected for very competitive fellowships from their universities, scientific societies, the National Science Foundation and the National Institutes of Health. In short, our students are becoming not only well-trained researchers, but also future leaders in science and academia. I should also note that every one of these students is from an underrepresented minority and/or low income group, and most are first generation college students. In this context, CSUSM is having a national impact on diversity in science and academia.

Our core student development programs are funded by the National Institutes of Health, the National Science Foundation and the California State University System. In addition, Dr. Victor Rocha (Associate Director of OTRES and Founding Director of OBRT) was recently funded by the US Department of Education for a HSI grant in collaboration with Palomar College. We are also very fortunate to work with with CSUSM faculty on other initiatives that support science training, research and education, including projects led by Denise Garcia (CoEHHS), Bianca Mothe (Biology), Matt Escobar (Biology), Jeff Nessler (Kinesiology), Charles De Leone (Physics), Edward Price (Physics), Kimberly D'Anna-Hernandez (Psychology), and Sara Bufferd (Psychology).

We are fortunate to have a large group of faculty colleagues across the university who mentor our scholars and provide high quality research opportunities and professional development. Their work is essential to the success of our students. I also need to acknowledge the incredible group of staff and administrators who support OTRES and contribute in innumerable ways to OTRES Scholar success and to grant success. Thank you all for your hard work and support!

Accomplishments

Student Accomplishments

- OTRES students continue to demonstrate excellence in scholarship and research. During the 2016-2017 AY, OTRES students presented their research findings at several different national and student conferences. Among these are the Annual Biomedical Research Conference for Minority Students (ABRCMS), Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), UCSD Summer Research Symposium, Symposium on Student Research, Creative Activities, & Innovation, Society for Neuroscience, and the Western Psychological Association (WPA), among others.
    - During the 2016-2017 AY OTRES scholars made a total of 85 scientific presentations.
    - 7 of the 2016 CSUSM Symposium on Student Research, Creative Activities & Innovation Finalists were OTRES students. Ivan Hernandez (MARC U*STAR Scholar) was a Statewide winner while Aaron Porter (LSAMP Scholar) was a runner-up.
    - Miguel Rosas (MARC U*STAR Scholar) received a Poster Presentation award at ABRCMS, a national student research conference.
    - OTRES Students Petrona Gregorio, Cristal Lopez and Stephanie Price received the CSUSM Library Award for Undergraduate Research, Scholarship & Creative Activity for a collaborative project.
    - Josephine Gonzales, former MARC U*STAR Scholar received an Honorable Mention for a Graduate Research Fellowship from the National Science Foundation.
- OTRES has established a lending library that is loaning textbooks to students in STEM courses.
- To date 28 OTRES Scholars have completed Ph.D. programs at top universities around the country, while 38 currently still working on Ph.D.'s
- To date 83 OTRES scholars have completed or are completing a M.A./M.S. degree with the intention of transitioning to Ph.D. Programs.

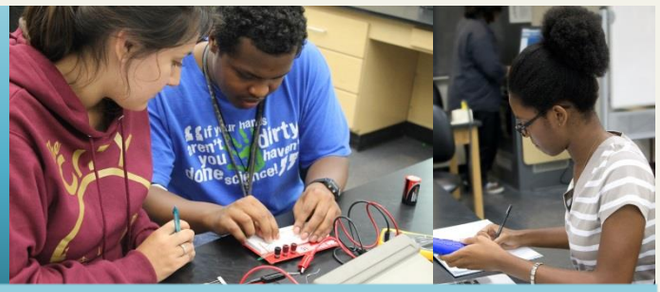
CSUSM Symposium on Student Research 2016 Finalists

From left: **Dr. Wesley Schultz, Aaron Porter, Kevin Tenerelli, Micah Savin, Petrona Gregorio, Brenda Cisneros & Ivan Hernandez**

CSUSM Library Award for Undergraduate Research, Scholarship and Creative Activity

From left: **Stephanie Price, Cristal Lopez, Petrona Gregorio & Dr. Graham Oberem**

NSF Fellowship/New Doctors!



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Former MARC U*STAR fellow awarded NSF Graduate Research Fellowships

In 2016, former MARC U*STAR Scholar Carlos Rosas was awarded fellowships from the National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) and the Ford Foundation. These prestigious programs recognize outstanding graduate students who are pursuing research-based master's and doctoral degrees in science and engineering.

Carlos Rosas
Ph.D. Student
University of Illinois at Chicago

New Doctors in the House!

Congratulations to former OTRES Students who successfully completed their doctoral degrees.

Sergio Ita, Ph.D. in Virology at Harvard Medical School.

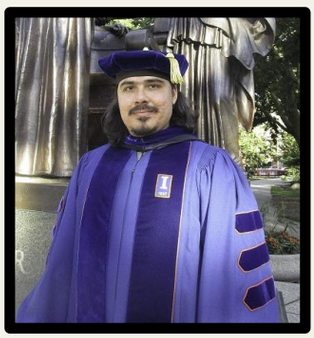
Letitia Jones, Ph.D. in Microbiology & Immunology at the University of Rochester School of Medicine & Dentistry.

Michael Santana, Ph.D. in Mathematics at the University of Illinois at Urbana-Champaign.

Mario Malfavon, Ph.D. in Chemistry at the University of Arizona.

David Vasquez, Ph.D. in Psychology at the University of California, Riverside.

Sergio Ita, Ph.D.
Former MARC & Bridges Scholar



Michael Santana, Ph.D.
Former NIGMS RISE Scholar

Letitia Jones, Ph.D.
Former NIGMS RISE Graduate Scholar

Mario Malfavon, Ph.D.
Former MARC U*STAR Scholar Scholar

David Vasquez, Ph.D.
Former MARC U*STAR Scholar

Where they Landed

Where they Landed

We would like to congratulate the OTRES Scholars who graduated in 2016. They had many impressive accomplishments during their time at CSUSM and are representing the MARC U*STAR, NIGMS RISE and LSAMP Programs well at their current institutions.

Robert Altamirano
Post-baccalaureate program at Indiana-Purdue University

Annalise Binette
Post-baccalaureate program at the University of Massachusetts Amherst.

Yesenia Cabrera
Ph.D. program at the University of California Los Angeles

Redd Driver
Ph.D. program at the University of Connecticut.

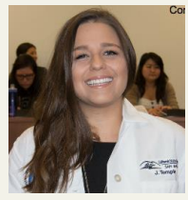
Hector Galvez
Ph.D. program at the University of California San Diego.

Erika Luis
Master's Program at San Diego State University.

Petrona Gregorio
Master's Program at California State University San Marcos.

Karlena Ochoa
Ph.D. Program at The University of Oregon.

Christa Park
Ph.D. Program at the University of Massachusetts Medical School.



Jayme Temple
Ph.D. Program at the University Colorado, Boulder.

Cipriano Zuluaga
Post-baccalaureate program at the University of Michigan.

Mentors/SRTP

OTRES Faculty Mentors

Thank you to the following CSU San Marcos faculty members who have recently supported OTRES Scholars by mentoring and directing research. Our students would not be as successful without their dedication.

Dr. Kambiz Hamadani, Biochemistry
Dr. Sajith Jayasinghe, Biochemistry
Dr. Matthew Escobar, Biology
Dr. James Jancovich, Biology
Dr. Betsy Read, Biology
Dr. Julie Jameson, Biology
Dr. Bianca Mothe, Biology
Dr. Thomas Spady, Biology
Dr. Jose Mendoza, Chemistry
Dr. Jacqueline Trischman, Chemistry
Dr. Ahmad R. Hadaegh, Computer Science
Dr. Xiaoyu Zhang, Computer Science
Dr. Michael Burin, Physics
Dr. Stephen Tsui, Physics
Dr. Dustin Calvillo, Psychology
Dr. Nancy Caine Psychology
Dr. Sharon Hamill, Psychology
Dr. Kimberly D'Anna-Hernandez, Psychology
Dr. Heike Mahler, Psychology
Dr. Kim Pulvers, Psychology
Dr. Wesley Schultz, Psychology
Dr. Keith Trujillo, Psychology

2016 Summer Research Training Program (SRTP)

Each summer Dr. Angelica Rocha leads the OTRES Summer Research Training Program (SRTP) for students interested in learning more about research. The program is open to current or future MARC, RISE, Bridges and LSAMP students. The goal of the SRTP is to introduce the entire process of scientific research to prepare students for mentored research with a faculty member. This past summer we had a cohort of 11 participants. Each student conducted a laboratory project that took them through the entire process of research, including forming a research question, selecting appropriate instrumentation, gathering data, analyzing results, and making rational conclusions regarding the questions asked. SRTP culminated in a symposium, at which the students presented the results of their projects in poster presentations.

From Left- Back Row: Isidro Alvarez, Terrence Haanen.

From left- Middle Row: Dr. Angelica Rocha, David Gonzalez, Oscar Yorba, Brayden Cortes, Victoria Marino.

From Left- Front-Row- Marilia De Sousa, Alexia Gee, Sofia Hernandez, Laura Gonzales, Joselyn Perez, Dr. Keith Trujillo.

Summer Research

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Summer 2016 Student Research Participation

A total of 9 Scholars participated in summer research opportunities across the nation.

Arthur (AJ) Castañeda, Summer Program in Neuroscience, Ethics & Survival (SPINES), Marine Biological Laboratory, Massachusetts.

Abraham Escobedo, Summer Program in Neuroscience, Ethics & Survival (SPINES), Marine Biological Laboratory, Massachusetts.

Francisco Fernandez, Summer Research Internship for Minority Students (SRIMS) Program, Marshall University, West Virginia.

Judith Flores, Stanford Summer Research Program (SSRP), Stanford University.

Selina Gonzalez, Cornell LSAMP REU, Cornell University.

Ivan Hernandez, Mentoring Summer Research Internship Program (MSRIP), University of California Riverside.

Jocelyn Olvera, Summer Training Academy for Research Success (STARS), University of California San Diego.

Miguel Rosas, Integrated Biological Sciences Summer Research Program (IBS-SRP) at the University of Wisconsin-Madison.

Micah Savin, Oklahoma Tobacco Research Center, University of Oklahoma Health Science Center.

Francisco Fernandez,
MARC U*STAR Scholar

"The SRIMS program at Marshall University helped me grow as a scientist. I was able to do research full time and network with professionals while having fun in new places. This was an opportunity that all students should experience."

OTRES Staff

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