McNair Research Journal SJSU

Volume 15 Spring 2019

Article 3

2019

Front Matter

Maria Cruz

Taylor-Dawn Francis

Follow this and additional works at: https://scholarworks.sjsu.edu/mcnair

Recommended Citation

Cruz, Maria and Francis, Taylor-Dawn (2019) "Front Matter," *McNair Research Journal SJSU*: Vol. 15, Article 3. Available at: https://scholarworks.sjsu.edu/mcnair/vol15/iss1/3

This Front Matter is brought to you for free and open access by SJSU ScholarWorks. It has been accepted for inclusion in McNair Research Journal SJSU by an authorized editor of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

SAN JOSÉ STATE UNIVERSITY

McNAIR SCHOLARS PROGRAM

RESEARCH JOURNAL

* San José State University and McNair

The Ronald E. McNair Post Baccalaureate Achievement Program was established by Congress in 1986 after the tragic explosion of the Space Shuttle Challenger that killed seven crew members, including Dr. McNair. Funded by the U.S. Department of Education, the program provides institutions with grants to develop and implement successful programs that recruit promising and aspiring low-income and first-generation students and those from backgrounds underrepresented at the doctoral level and prepares them for the rigors of graduate level work. Currently, the program operates at 187 campuses across the country serving over 5000 scholars each year.

Since the McNair Scholars Program's inception at SJSU in 1996, McNair has successfully recruited over 300 low-income and first-generation students and individuals who are underrepresented at the doctoral level. Of those who have completed the program, 98% have earned their bachelor's degree, far exceeding the 16% - 20% for this population nationwide. Eighty percent of our SJSU graduates have finished or are pursuing a graduate school degree, and 100% of our students who are in graduate school are continuously enrolled. SJSU has McNair alumni teaching or studying at universities across the United States, as well as in Germany, Columbia, Kenya, Australia, Turkey, and Morocco. We are extremely proud of our students and our program's successes.

San José State University does not discriminate on the basis of race, color, creed, national origin, gender, sexual orientation, age, or disability in the administration of its educational policies, admissions policies, fellowship and loan programs, or other programs. San José State University is in compliance with Section 504 of the Rehabilitation Act of 1973 and provides accessible walkways, ramps, and reserved parking spaces for the handicapped.

The information and policies included in this journal were current when printed, but are subject to change without notice. Additional and more current information may be found on the World Wide Web at <u>http://www.sjsu.edu</u>.

This journal can also be accessed at http://scholarworks.sjsu.edu/mcnair/.

MCNAIR PROGRAM STAFF

DR. MARIA ELENA CRUZ Director Principal Investigator

TAYLOR-DAWN FRANCIS Program Assistant

HERIBERTO ZAVALA Program Assistant

MARTHA TORAL Administrative Coordinator

Faculty Mentors for the 2018-2019 Research Year

DR. MAGDALENA L. BERRERA DR. NICHOLAS B. CRAMER DR. MARIA ELENA CRUZ DR. RACHAEL FRENCH TAYLOR-DAWN FRANCIS DR. JASON LAKER DR. NEELAM RATTAN DR. DAVID SCHUSTER DR. SEAN SWEI

Editors DR. MARIA ELENA CRUZ TAYLOR-DAWN FRANCIS DRA. AURORA CHANG

Photography – Cover/Background MALIK X. WILLIAMS

ACKNOWLEDGMENTS

WE ARE DEEPLY GRATEFUL TO THE FOLLOWING PERSONS FOR THEIR SUPPORT:

U.S. DEPARTMENT OF EDCUCATION

LINDA BYRD-JOHNSON Director of the Office of Federal Trio Programs

CARMEN GORDAN Program Officer SAN JOSÉ STATE UNIVERSITY ADMINISTRATION

DR. MARY A. PAPAZIAN President

PATRICK K. DAY Vice President of Student Affairs

DR. SHARON WILLEY Sr. Associate Vice President for Enrollment Management Division of Student Affairs

> DR. PAMELA STACKS Associate Vice President for Research

A MESSAGE FROM THE DIRECTOR

The San José State University McNair Scholars Program is pleased to present the fifteenth SJSU McNair Scholars Research Journal. This journal represents the diverse and practical research experiences of the McNair Scholars during the 2018-2019 academic year.

I would like to congratulate the scholars for their hard work, dedication, and accomplishments during the spring course and in the summer research program. I also wish to express my sincere appreciation to the faculty mentors for their guidance, time, and commitment to the scholars, their research, and the program. A particular word of thanks goes out to the families and extended support systems that made these outstanding presentations possible.

This year, we are honoring Andrea Coto, Ling Le, and Angeles De Santos Quezada. Andrea Coto's work is called, "The Effect of Manufacturing Variables on the Mechanical Properties of Biopolymer-bound Soil Composites," and she will be attending Stanford's Department of Civil and Environmental Engineering Master's and PhD program in the fall of 2019. Ling Le's work is called, "Unpacking the Imposter Syndrome and Mental Health as a Person of Color First Generation College Student within Institutions of Higher Education," and she will be attending New York University in fall 2019. Angeles De Santos Quezada's work is called, "English Language Minority Students and Education Policy: A Focus on the Latinx Population," and she will be attending The University of Texas, Austin in the Department of Education.

On the cover of this year's journal, we have highlighted Ling Le and Angeles De Santos Quezada, who both reflect outstanding perseverance, determination, resilience, as well as love and dedication for their work. These students are honored because they are outstanding McNair Scholars and leaders at San José State University. We are so proud of the work these women are doing and will continue to do as PhD scholars. A special thanks to Sr. Associate Vice President for Enrollment Management Division of Student Affairs, Dr. Sharon Willey, and to our former Associate Vice President of Student Faculty and Success, Stacy Gleixner for sponsoring the McNair Scholars Journal at San José State University.

TABLE OF CONTENTSMcNair Research Papers

1 Christopher Conetta

"Individual Differences in Cyber Security." FACULTY MENTOR: Dr. David Schuster, Department of Psychology

21 Ling Le

"Unpacking the Imposter Syndrome and Mental Health as a Person of Color and First-Generation College Student within Institutions of Higher Education."

FACULTY MENTOR: Dr. Neelam Rattan, Department of Psychology

35 Monica Martinez

"Toxic Masculinity: An Outcome of Colonialism and its Effects on the Latinx/Chicanx LGBTQ+ Community."

FACULTY MENTOR: Dr. Magdalena L. Barrera, Department of Chicana and Chicano Studies and Dr. Maria E. Cruz, Director, McNair Scholars Program

65 Manae Matsubara

"Insulin signal transduction mediates ethanol-induced feeding dysfunction in a fly model of Fetal Alcohol Spectrum Disorder." FACULTY MENTOR: Dr. Rachael French, Department of Biological

Sciences

77 Emily Mu

"Gαi and GV30A act downstream of *Tre1*in *Drosophila* courtship." FACULTY MENTOR: Dr. Rachael French, Department of Biological Sciences and Dr. Maria E. Cruz, Director, McNair Scholars Program Department of History

85 Jose Jaime Esquivel Patricio

"Effects and Solutions on the Human Body After Long-Duration Space Flights." FACULTY MENTOR: Taylor-Dawn Francis, Program Assistant, McNair Scholars Program

104 María de los Ángeles De Santos Quezada

"English Language Minority Students and Education Policy: A Focus on the Latinx Population."

FACULTY MENTOR: Dr. Jason Laker, Department of Counselor Education

121 Uyen Sou

"Investigation into the Effects of Blade Tip Twist on Noise Reduction for a NACA 0012 Rotor Blade."

FACULTY MENTOR: Dr. Nicholas B. Cramer, NASA and Dr. Sean Swei, Department of Aerospace Engineering