



CENTER FOR  
STUDENT RESEARCH  
TEXAS WOMAN'S UNIVERSITY

# ANNUAL REPORT

**FY 2020-2021**



## Table of Contents

Mission and Purpose .....	1
Highlights.....	1
Student Engagement By-the-Numbers .....	2
Student Research Grants Final Reports .....	3 - 6
Student Travel Presentation Grants Final Reports .....	7 - 8



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### Mission and Purpose

The mission of the Center for Student Research is to enhance the educational experience of students by providing opportunities for meaningful engagement in faculty-mentored research and creative activity opportunities. The purpose of the Center for Student Research is to promote an enhanced educational experience for students by providing opportunities for meaningful interaction between faculty and students through support, education, and programming in research and creative activities. The goals of CSR are to:

- provide opportunities for students to participate in all phases of research and creative activity, from design through dissemination;
- facilitate research partnerships between TWU students and faculty promoting faculty- mentored research opportunities for students;
- facilitate scholarly/creative partnerships between TWU students and faculty promoting faculty-mentored scholarly/creative opportunities for students;
- facilitate research collaboration between graduate and undergraduate students;
- enhance the students' knowledge of all phases of research;
- promote a national presence for TWU students (i.e. National Council for Undergraduate Research - NCUR, Society for the Advancement of Chicanos and Native Americans in Science - SACNAS); and
- ensure mutual benefit to both students and faculty members.

### AY 2020 - 2021 Highlights

- **Grants** - Over \$23,233 was awarded to both undergraduate and graduate students to support research and the presentation of research. The maximum for each award was \$500 and 60 students (11 undergraduate and 49 graduates) were recipients. See individual award information beginning on page 3.
- **Center for Student Research Workshop Series** - Monthly presentations were provided virtually and topics included the following: *Why Research?*, *The Interview Process for Internship or Research Experiences*, *How Research Impacted My Future*, *Regain Your Power Back from Imposter Syndrome*, and *Your Library: Your Research Ally*.
- **Student Creative Arts and Research Symposium** – For this virtual symposium, over 224 abstracts were accepted for presentation and can be found in the 2021 Student Creative Arts & Research Symposium Program. The Chancellor's Student Research Scholars were selected and received their awards. Students who accepted to the Symposium have been invited to place their research in the TWU Library archives.

## Student Engagement Summary

EVENT	# STUDENTS ENGAGED
<b>Student Creative Arts and Research Symposium</b>	
Accepted abstracts	224
UG	101
Post-Bac	3
Master's	60
Doctoral	60
<b>Total Engaged</b>	<b>224+*</b>

\*As many abstracts had multiple authors, the actual number engaged is higher than the total number of abstracts.

<b>CSR Student Research and Research Presentation/Publication Grant Awards</b>	
UG	11
GS	47
Post-bac	2
<b>Total Engaged</b>	<b>60</b>

<b>Workshops/Presentations/Individual Meetings</b>	
<b>Total Engaged (UG &amp; GS)</b>	<b>150+</b>
<b>Total Engagements</b>	<b>434+</b>

**2020-2021 Student Research Grants**

<b>Student(s)</b> <b>Mentor</b> <b>Department</b>	<b>Title of Research</b>
Alexandra Alcozer Dr. Camelia Maier Biology	Designing a Test to Identify Male and Female Mulberry at the Sapling Developmental Stage
Shenavia Balcom-Luker Dr. Monique LeMieux Nutrition & Food Sciences	Cholesterogenic and Lipogenic Effects of Whey Protein Isolate in Women with PCOS
Logan Berlof Dr. Martin Rosario Physical Therapy – Dallas	The Association of Energy Drinks on Static Motor Control in Young Adults
Carley Bowman Dr. Martin Rosario Physical Therapy – Dallas	Lower Extremity Electromyographic and Postural Control Measurements to Assess Standing Deviations in People with HIV
Francilia de Kassia Brito Silva Dr. Kathleen E. Davis Nutrition & Food Sciences	Food Literacy Intervention a Pilot Study
Daisy Cantu Dr. Dayna Averitt Biology	Sex Differences in the Activity of the Trigeminal Neurons During Stress Exacerbated Orofacial Pain
Briley Casserilla Dr. Della Molloy-Daugherty Music and Theatre	An Analysis of Adaptive Wind Instruments in Music Therapy
Christina Cavener Dr. Danielle Phillips Language, Culture, and Gender Studies	A Feminist Qualitative Exploration of How Race and Gender Shape White Women's Political Engagements
Marcella Clinard Dr. Claire Sahlin Language, Culture, and Gender Studies	Intersections of Religion and Race in Women's and Gender Studies: Possibilities for Teaching Introductory Courses
Alexandre Costet Dr. Martin Rosario Physical Therapy - Dallas	Pushing a Sled: Assessing its Impact on Gait and Neuromuscular Activation
Brett Crossland Dr. B. Rhett Rigby Kinesiology	The Effects of Cannabidiol on Markers of Performance Following Eccentric Exercise

Ty Darnell  
Dr. Pei-Fen Chang  
Occupational Therapy -Houston

Examining Changes in Social Isolation and Loneliness in Seniors, Veterans, Minorities and Individuals with Disabilities using iezhub.com

Mindy Davila  
Dr. Xiaofen Du  
Nutrition & Food Sciences

Development of Chemical References for Pecan Flavor Lexicon

Holly Eddy  
Dr. Adam Jones  
Human Development, Family Studies, and Counseling

Using Deliberate Practice to Improve MFT Therapy Skills: A Pilot

LaWanna Fant  
Dr. Jessica Gullion  
Sociology

An Exploratory Study Regarding Lived Experiences of People of Color Hospitalized with mental disorders.

Erica Garcia  
Dr. Juliet Spencer  
Biology

The Effects of Human Cytomegalovirus on Breast Tumor Progression

Myles Gladen  
Dr. Zane Lybrand  
Biology

Effects of Acute Brain Rest on Recovery in Mice with Moderate to Severe Traumatic Brain Injury

Ryan Gordon  
Dr. Anthony Duplanty  
Kinesiology

Micro-RNA Mediated Regulation of Myogenesis in Response to Exercise: an In Vitro Model

Frederick Harris  
Dr. Danielle Woolery  
Music and Theatre

An Analysis of Thematic Material in Artik by Alan Hovanes

Taylor Hickman  
Dr. Dayna Averitt  
Biology

Role of Estrogen Receptors in Macrophage Release of Serotonin

Michael Paul Hunter  
Dr. Dayna Averitt  
Chemistry, Biochemistry, and Biology

Examining Nociception Induced Arborization Following Thermal Injury

Ola Kayed  
Dr. Shanil Juma  
Nutrition & Food Sciences

Investigating the Dose Dependent Effect of Beetroot Polyphenols on Mouse Osteoblastic Differentiation

Abigail Kenning  
Dr. Michael Bergel  
Biology

The Role of Calcium Signaling in UV-Induced Chromatin Compaction

Mohammed Farhan Lakdawala  
Dr. Tina Gumienny  
Biology

Identification of Physical Interaction Between Transcription Factors SMA-3 and BLMP-1

Angela Lopez-Ramirez  
Dr. Dayna Averitt  
Biology

Role of Serotonin Receptor 3 (5HT3) in Trigeminal Pain Processing in Female Rats

Megan Morse  
Dr. Sushmita Sinha  
Biology

Expression of SIRPy on Treg Cells in Human Blood Samples

Adriana Muniz  
Dr. Xiaofen Du  
Nutrition & Food Sciences

Investigation of Volatile Profiles of Five Pecan Oils Using SAFE-GC-MS Techniques

Temiloluwa (Peace) Olaoluwa  
Dr. Dayna Averitt  
Biology

*Euphorbia bicolor* As a Potential Burn Pain Therapeutic

Rosario Olguin-Aguirre  
Dr. Claudia Porras Pyland  
Psychology & Philosophy

Defining Violence and Exploring Factors That Impact Help-seeking

Veronica Popp  
Dr. Danielle Phillips  
Language, Culture, and Gender Studies

Pillars of Strength: The Literary and Labor Work of Nannie Helen Burroughs

Rebecca Qian  
Dr. Carolyn Moore  
Nutrition & Food Sciences - Houston

The Impact of Family Gardening Kits with an After-School Garden Enhance Nutrition Education (gene) on Vegetable Preference, Intake, and Home Availability of Children

Ingrid Quintas  
Dr. Shanil Juma  
Nutrition & Food Sciences

Anti-Oxidant and Anti-Inflammatory Actions of Beta Glucan in Lipopolysaccharide-Stimulated Mouse Macrophage Cells

Emily Rich  
Dr. Asha Vas  
Occupational Therapy –Dallas

Multimodal Group Rehabilitation in POTS

Mafia Mahabub Rumpa  
Dr. Camelia Maier  
Biology

Building a Butterfly Garden Pollen Database and its Practical Application to the Plant-Pollinator Studies

Samantha Salcedo  
Dr. Jennifer Ensign Wilson  
Nursing - Dallas

Faculty and Student Perceptions of Incivility in Nursing Education

Hala Samara  
Dr. Catalina Pislariu  
Biology

Elucidating lipid binding properties of *the Medicago truncatula* NPD1 Protein

Natalia Santos  
Dr. Dayna Averitt  
Biology

Sex Differences in Learned Helplessness and Blood Plasma Corticosterone in a Rat Model of Sub-chronic Stress

Kavitha Shankaranarayanan  
Dr. Derek Mketinas  
Nutrition & Food Sciences - Houston

Does Community Eligibility Provision (CEP) Increase School Meal Participation and/or Influence Health Indicators Such as Body Mass Index in School-aged Children?

Rituparna SinhaRoy  
Dr. Michael Bergel  
Biology

The Response of Chromatin to Ultraviolet and Gamma Radiation

Matthew Sokoloski  
Dr. B. Rhett Rigby  
Kinesiology

Muscle Damage and Muscular Performance Following the Physical Abilities Test in Professional Firefighters

Aparna Sunny  
Dr. Sushmita Sinha  
Biology

Modulation of Effector Responses by Blocking SIRP Gamma on Human T-Cells

Rebekah Urban  
Dr. Claudia Porras Pyland  
Psychology & Philosophy

Development and Validation of the Gender Inclusive Rape Myth Acceptance Scale

Jakin Vela  
Dr. James Williams  
Sociology

LGBT Guilds as Virtual Buffers to Sexual Minority Stress

Juliza Vidales  
Dr. Jennifer Woo  
Nursing – Dallas

Barriers and Facilitators of Engaging Pregnant Spanish-Speaking Hispanic Women in Research

I'ceyonna Ware  
Dr. Camelia Maier  
Biology

Estrogenic and Anti-estrogenic Activities of Texas Prickly Ash, *Zanthoxylum hirsutum*

Emily Willis  
Dr. Pamela Gonzales  
Nursing – Dallas

Self-Efficacy in Transition from Student to Nurse

Emily Zumbro  
Dr. Anthony Duplanty  
Kinesiology

Exercise Effects on Aging Skeletal Muscle: An In Vitro Model



**2020-2021 Student Research Presentation/Publication Grants****Students****Mentor****Department****Title of Research Presentation or Publication**

Anas Ababneh  
Dr. Suh-Jen Lin  
Physical Therapy - Dallas

"Usability and Effectiveness of a Self-care mHealth App in Heart Failure" presented at Combined Sections Meeting at APTA (Virtual) from 2/1/2021 - 2/28/2021.

Akshaya Arva  
Dr. Christopher Brower  
Biology

"The Ligand of Ate1 (Liat1) is an Intrinsically Disordered Protein that Participates in Nucleolar Liquid-Liquid Phase Separation Regulated by Jumonji Domain Containing 6 (Jmjd6)" published in the journal: Proceedings in the National Academy of Sciences (PNAS)

Renee Beach  
Dr. Christian Hart  
Psychology & Philosophy

"Self-Reported Experiences with Pathological Liars" presented at Society for Police and Criminal Psychology Conference 2021 in Arlington, TX from 9/30/2021 - 10/2/2021.

Francilia de Kassia Brito Silva  
Dr. Kathleen E. Davis  
Nutrition & Food Sciences

"Freshman College Students' Views of Food Insecurity, Causes, and Potential Solutions" presented at Food & Nutrition Conference & Expo (FNCE 2021) (Virtual) from 10/16/2021 - 10/19/2021.

Allison Butcher  
Dr. Wayne Brewer  
Physical Therapy - Houston

"Barriers to Physical Therapy Access in a Public Hospital System" presented at American Academy of Orthopedic Manual Physical Therapists 2020 Conference (Virtual) from 11/5/2020 - 11/8/2020.

Rebekka Girard  
Dr. Rachel N. Simons  
Library & Information Studies

"Supporting Inclusive Gaming Communities Through Fostering Online-Offline Hybrid Spaces" presented at ASIS&T - Association for Information Science and Technology 83rd Annual Meeting (Virtual) from 10/22/2020 - 11/1/2020

Kylee Guthrie  
Dr. Hui-Ting Goh  
Physical Therapy - Dallas

"Effect of Secondary Cognitive Task on Age-Related Dual-Task Gait" presented at Combined Sections Meeting for American Physical Therapy Association (Virtual) from 2/1/2021 - 2/28/2021.

Elizabeth Keener  
Dr. Suzanna Dillon  
Kinesiology

"Occupational Socialization and Experiences of Fitness and Recreation Personnel at a College for Neurodiverse Learners" presented at Pacific Rim International Conference on Disability & Diversity (Virtual) from 3/1/2021 - 3/2/2021.

Victor Lozada  
Dr. Annette Tores Elias  
Literacy and Learning

"Sing, Say, Dance, and Play: Language Development in an Artful Way" presented at 25<sup>th</sup> La Cosecha Dual Language Conference (Virtual) presentation from 11/4/2020 – 11/7/2020.

Megan Owens  
Dr. Wesley Tucker  
Nutrition & Food Sciences - Houston

"Food Insecurity and Overweight/Obesity Associated with Poor Diet Quality During COVID-19 Pandemic" presented at The Obesity Society Annual Meeting (Virtual) from 11/2/2020 - 11/6/2020.

Emilio Rios-Jimenez  
Dr. Annette Torres Elias  
Teacher Education and Literacy and Learning

"Naranja dulce, limon partido": Conectando a la familia con el folklor para desarrollar la lectoescritura" presented at La Cosecha Dual Language Conference (Virtual) from 11/4/2020 - 11/7/2020.

Qin Yang  
Dr. Suzanna Dillon  
Kinesiology

"Drums-Alive Intervention Effect on the Motor and Functional Skills in Adolescents with Intellectual Disabilities and Autism Spectrum Disorder: A Pilot Study" published in the journal: Advances in Physical Education