



CENTER FOR  
STUDENT RESEARCH  
TEXAS WOMAN'S UNIVERSITY

# ANNUAL REPORT

**FY 2022-2023**



## Table of Contents

Mission and Purpose .....	1
Highlights.....	1
Student Engagement By-the-Numbers .....	2
Student Research Grants Awarded .....	3 - 6
Student Research Presentation Grants Awarded .....	7 – 12
Student Research Publication Grants Awarded.....	12



CENTER FOR  
STUDENT RESEARCH  
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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 Natives Americans in Science - SACNAS); and
- ensure mutual benefit to both students and faculty members.

### AY 2022 - 2023 Highlights

- **Grants** - Over \$49,125.72 was awarded to both undergraduate and graduate students to support research and the presentation of research. The maximum for each award was \$500 and 146 students (34 undergraduate and 112 graduates) were recipients. See individual award information section.
- **Center for Student Research Workshop Series** - Monthly presentations were provided virtually and topics included the following: *Resilience and Its Importance to Your Future Research Success; The Library and Your Research: A Necessary Collaboration; Writing and Your Research; Nationally Competitive Scholarships, Fellowships, and Other Opportunities; Forward Momentum and Your Research; and Research Internship Experiences with Laura Ruemmele.*
- **Student Creative Arts and Research Symposium** – For this virtual symposium, over 225 abstracts were accepted for presentation and can be found in the 2023 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

<b>EVENT</b>	<b># STUDENTS ENGAGED</b>
<b>Student Creative Arts and Research Symposium</b>	
Accepted Abstracts	232
Poster Presentations	126
Platform Presentations	37
Virtual Presentations	69
<b>Total Presentations &amp; Number of Students Engaged</b>	<b>232*</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	34
GS	112
<b>Total Engaged</b>	<b>146</b>
 <b>Workshops/Presentations/Individual Meetings</b>	
<b>Total Engaged (UG &amp; GS)</b>	<b>150+</b>
 <b>Total Engagements with UG &amp; GS</b>	<b>528+</b>

## 2022-2023 Student Research Grants

<b>Student(s) Mentor Department</b>	<b>Title of Research</b>
Anne-Marie Alford Dr. Kathleen Davis Nutrition & Food Science	Engagement in Nutrition Education Provided on Instagram Versus Facebook Among Snap-Eligible Parents of Preschoolers
Hunter Alvis Dr. Rhett Rigby Kinesiology	The Biomechanical Effects of Assisted Batting Equipment in a Wheelchair Softball Batting Swing
Jace Brown Dr. Sharon Wang-Price Physical Therapy	Use of Color Doppler Ultrasonography for Assessment of Dry Needling Effect on Blood Flow
Traci Causey Dr. Dr. Ann Amuta School of Health Promotion and Kinesiology	Multi-Level Influences on Seafood Consumption Among Supplemental Nutrition Assistance Program Participants in New Orleans, LA
Cayla Clark Dr. Rhett Rigby SHPK	Exercise Effects on Aging Skeletal Muscle: An In Vitro Model
Gage Connors Dr. Juliet Spencer Biology	Investigation of Cell Signaling by the US27 Gene of Human Cytomegalovirus
Liliana Driver Dr. Gustavo A. Salazar Chemistry & Biochemistry	Removal, Isolation, and Analysis of Microplastics from Local Soil Using Physical and Chemical Techniques
Erica Garcia Dr. Juliet Spencer Biology	The Effects of Human Cytomegalovirus on Breast Cancer Cells: Hormone Receptor Level Regulation
Andrea Jackson Dr. Judith McFarlane Nursing	How Parents Care for Their Child During a Sickle Cell Crisis Without Medical Intervention?
Kenneth L Miller Dr. Mary Thompson Physical Therapy	Descriptive Study Exploring Trauma in Early Career Physical Therapists Licensed Five Years or Less
Vy Cao-Nguyen Dr. Debra Mollen Counseling Psychology	Perceptions of Intergenerational Trauma in Adult Children of Vietnamese Refugees
Amanda North Dr. Lisa Rosen Psychology & Philosophy	Perspectives of U.S. Military Veterans Regarding Mindfulness Practices
Jose Paniagua Dr. Nasrin Mirsaleh-Kohan Chemistry & Biochemistry	Spectral Analysis of Carbon Nanotubes and Their Molecular Adsorption of Carbon Dioxide

## Center for Student Research Annual Report AY 2022-2023

Rajdeep Samara  
Dr. Laura Hanson  
Biology

Testing Antiviral Properties of Traditionally Used Medicine

Zahra Somani  
Dr. Adam Jones  
HDFS

The Impact of Gender Role Expectations on South Asian American Women: A Qualitative Study

Nicole Varone  
Dr. Kyle Biggerstaff  
School of Health Promotion and Kinesiology

Anaerobic Performance in the Ovulatory VS Luteal Phases of the Menstrual Cycle.

Jennifer Whittaker  
Dr. Cynthia Evetts  
Occupational Therapy

Examining an Application of Occupation-Based Theoretical Models to Population-based Occupational Therapy Practice: A Foucauldian Critical Discourse Analysis

Angelica Addo  
Dr. Maria Peterson-Ahmad  
Teacher Education

Culturally Responsive High Leverage Practices (HLPs) in Evaluation: An Examination of the Barriers

Akinwande Akinniyi  
Dr. Gustavo A. Salazar  
Chemistry & Biochemistry

Bringing Photodegradation of Plastic-Waste into the "Green Age"

Maribel Alcala  
Dr. Wyona Freysteinson  
Nursing

The Effects of a M-Health Innovation on Health Literacy and Asthma Control in Spanish-Speaking Parents of Children with Asthma

Juan E. Armijo  
Dr. Catherine Dutton  
Human Development, Family Studies, & Counseling

First-Generation, Latino Male College Student Use of Photos to Describe what Influences their College Experience: A Photo-Elicitation Arts-Based Qualitative Study

Delores Davis  
Dr. Laura Hanson  
Biology

Stability of Microtubules

Jeniffer Dolinta  
Dr. Wyona Freysteinson  
Nursing

The Journey and Experiences of Female Hispanic Nurse Leaders

Page French  
Dr. Nasrin Mirsaleh-Kohan  
Chemistry & Biochemistry

Investigation of the Antineoplastic Agents Carboplatin and Heptaplatin In the Presence of DNA

Taylor Hickman  
Dr. Dayna Averitt  
Biology

Differential Gene Expression Underlying Female Prevalence in TMJ

Meredith Higgins  
Dr. Debra Mollen  
Counseling Psychology

Factors Affecting Mental Health Providers' Competent Care of Transgender and Gender Nonbinary Clients

Ray Lunasin  
Dr. Sharon Wang-Price  
Physical Therapy

The Effect of Dry Needling on Sleep Quality, Pain Intensity and Function for Individuals with Chronic Neck Pain and Sleep Disturbance: A Pilot Study

Megan Morse  
Dr. Sushimita Sinha  
Biology

SIRP $\alpha$ -mediated Regulation of Lck Expression in Activated T Cells

Monica Palacios  
Dr. Mandy Golman  
Health Studies

Florida Public High School Counselors Perception of Safe Spaces, Suicide Ideation and Suicide Attempts

Salena Parker  
Dr. Gretchen Busl  
LCGS

What She Carries with Her

Rudie Spigarelli  
Dr. Rupal Patel  
Physical Therapy  
Tamara Starling  
Dr. Julie Herbstrith  
Psychology

What Affects DPT Students' Sleep? A Study of the Status and Factors that Impact Sleep Quality of Doctor of Physical Therapy Students in the United States.  
Influence Of Social Emotional Learning On Coping, Self-efficacy, and Belongingness

Halie Wright  
Dr. Asha Vas  
Occupational Therapy

Does Adaptive Golf Improve Posture and Participation in Activities of Daily Living in Those with Parkinson's Disease?

Alondra Ammon  
Dr. Cynthia Evetts  
Occupational Therapy

Diversity Meets Equitable and Inclusive Fieldwork: A Qualitative Phenomenological Study

Jason Cravens  
Dr. Rebecca Lucero Jones  
Human Development, Family Studies, & Counseling

The Quiet Crisis: An Interpretive Phenomenological Study on Parental Experiences of Youth Inpatient Treatment

Brittany Culp  
Dr. Jennifer Woo  
Nursing

Barriers and Motivators for Joining the Midwifery Profession in Black Nursing Students

Douglas Davis  
Dr. Laura Hanson  
Biology

Examining Regulatory Mechanisms of the Essential Murine Cytomegalovirus Gene M142

Raven Gallenstein  
Dr. Shiru Lin  
Chemistry & Biochemistry

Molecular Modeling of Poly(bisphenol A carbonate) to Determine Interaction Energy and Reaction barriers Using DFT Calculations.

Cynthia Ine  
Dr. Mikyoung Lee  
Nursing

The Effect of a Text Message Intervention on Physical Activity and Healthy Eating Behaviors in African American Women Who are Overweight or Obese

Mary Susan Karpel  
Dr. Marilyn Massey-Stokes  
Health Studies

Examining the Relationship Between Coping Strategies and Positive Body Image Among Older Women

Youjin Kim  
Dr. Shiru Lin  
Chemistry

Computational Chemistry on Investigating Copper, Carbon-doped Graphene Catalyst for CO<sub>2</sub> Reduction Reactions

Jamie Kimbrell Dr. Heather Conrad Webb Biology	Exploring Protein Concentrations of Key Glutathione Biosynthesis Enzymes via Immunodetection in Hela Cells
Tierney Klee Dr. Xiaofin Du Nutrition & Food Sciences	Quantification of Remaining Acids in Aromatic Hops After Dry Hopping
Halima O. Kouadio Dr. Manal Omary Chemistry & Biochemistry	Synthesis of Cu(I)-Niacinamide Coordination Complexes via Alteration of Synthetic Routes
Adam C. Kuentzel Dr. Gabrielle P.A. Smith Psychology	Gender and Racial Workplace Bias: Emotion Regulation, Repression, and Expression
Albertine McGill Dr. Danhui Wang Nutrition & Food Sciences	Investigation of the Physical and Microbiology Quality of Pea Microgreens Enriched with Probiotic Bacteria
Megan Morse Dr. Sushmita Sinha Biology	Regulation of Effector Response in Naive T cells
Regina Newman Dr. Helen Everts Nutrition & Food Sciences	Dose-dependent Effects of Vitamin A on Hair Follicle Stem Cells
Nathan Nguyen Dr. Alex Klacman Nursing	Pediatric Critical Care Nurses' Perceptions on the Cardiopulmonary Resuscitation of Obese Pediatric Patients: A Focus Group Study
Isabel Obregon Dr. Shanil Juma Nutrition & Food Sciences	Dose Dependent Action of Beetroot Polyphenols on Human Umbilical Vein Endothelial Cells: In Vitro Model for Cardiovascular Health
Miteshri Dhiraj Prajapati Dr. Kathleen Davis Nutrition & Food Sciences	Effectiveness of a YouTube-Delivered Nutrition Education Intervention among Parents of Children with Obesity and Autism
Linsey Rodriguez Dr. Danhui Wang Nutrition & Food Sciences	Investigation of the Efficacy of Different Post-Harvest Washing Methods for Fresh Spinach
Christine VanBuren Dr. Helen Everts Nutrition & Food Sciences	The Localization of ABCA4 in the Mouse Hair Follicle
Elisabeth Wise Dr. Mary Thompson Physical Therapy	The Effect of Hand Mobility and Grip Strengthening Exercise on Upper Limb Volume, Quality of Life, and Hand Function in Breast Cancer Survivors



## 2022-2023 Student Research Presentation Grants

### Students

### Mentor

### Department

Shaunte Alvarez Minor  
Dr. Aimee Myers  
Teacher Education

Briana Arellano  
Dr. Heather Roberts  
Occupational Therapy

River Gallagher  
Dr. Aimee Hendrix-Soto  
Literacy and Learning

Myles Gladen  
Dr. Zane Lybrand  
Biology

Taylor Hickman  
Dr. Dayna Averitt,  
Biology

Melissa Lopez  
Dr. Suh-Jen Lin  
Physical Therapy

Isabelle Marshall  
Dr. Suh-Jen Lin  
Physical Therapy

Zulma E. Mojica  
Dr. Mandy Stewart  
Literacy & Learning

Angeles Muñoz  
Dr. Mary Stewart  
Literacy & Learning

Temiloluwa Olaoluwa  
Dr. Dayna L. Averitt  
Biology

Cooper Overton  
Dr. Suh-Jen Lin  
Physical Therapy

Moriah Pearce  
Dr. June Levitt  
COMS

Jaida Pryor  
Dr. Rebecca Lucero Jones  
Marriage & Family Therapy

### Title of Research Presentation or Publication

Women of Color: Navigating the System with Poise, Perseverance, and Passion in Pursuit of a Doctoral Degree.

Caregiver Perceptions and Ability to Implement an Intensive Upper Limb Therapy Program in the Home Environment

Supporting LGBTQ+ Students in English classrooms

Building Cortical Grafts from Induced Pluripotent Derived Stem Cells for Traumatic Brain Injuries

Estrogen and Serotonin's Modulatory Role in Nneuroinflammation Provide a Mechanism Underlying Sex Differences in Pain

The Efficacy of Inspiratory Muscle Training on Respiratory Muscle Strength and Pulmonary Function in Individuals With Spinal Cord Injury – a Systematic Review

The Efficacy of Inspiratory Muscle Training on Respiratory Muscle Strength and Pulmonary Function in Individuals With Spinal Cord Injury – a Systematic Review

Presentation 1 - A Teacher's Perception of Translanguaging in the Dual Language Classroom  
Presentation 2 - Literacy Research across Borders: Disrupting English Hegemony in Literacy Research Spaces

Translanguaging in Multilingual and Multicultural Classrooms

Euphorbia Bicolor Induces Analgesia in a Rat Model of Burn Pain via Altering Cytokines and Chemokines in the Dorsal Root Ganglia and Reducing Pronociceptive Peptide Release at the Spinal Cord

Effects of Virtually Delivered Exercise Program on Breathing Strength and Lung Function in Individuals with Spinal Cord Injury- A Retrospective Study

A Perceptual Study: "Intent" and "Loud" Instructions on Individuals with Parkinson's disease.

Uncovering the Lived Experience of Marriage and Family Therapists Working with Incarcerated Youth: A Phenomenological Approach

Mafia Mahabub Rumpa  
Dr. Camelia Maier  
Biology

*Maclura pomifera* Plant Extracts Inhibit Proliferation and Induce Apoptosis in ER-positive Breast Cancer Cell Lines

Seth Watson  
Dr. Elaine Jackson  
Physical Therapy

Predictors of Treatment Adherence in Patients with Centralized Low Back Pain

Rebecca Woodruff  
Dr. Sarah Wainscott  
COMS

Students Who are Deaf/HH: MisMatch of Service Needs and Graduate Training Programs

Kishwar Zla  
Dr. Aimee Hendrix  
Literacy & Learning

Preparing Students for Media Literacy with Social Emotional Learning

Hunter Alvis  
Dr. Rhett Rigby  
Kinesiology

Light Therapy Device for Entrainment of Circadian Rhythm Desynchronization

Shalom Anyiam  
Dr. Jennifer Woo  
Nursing

Listening to Black Pregnant and Postpartum Women and their Knowledge and Experiences with Midwifery Care and Birth Centers in Texas

Abigail Baird  
Dr. Sally Stabb  
Psychology

Cross-Cultural Utility of Performance Validity Indicators in a Community Sample from Kampala, Uganda

Felisha Burleson  
Dr. Catherine Dutton  
HDFSC

Supporting Parenting Students in Higher Education

Daisy J. Cantu  
Dr. Dayna Averitt  
Biology

Sex Differences in GABAergic and Serotonergic Trigeminal Sensory Neurons Innervating the Vibrissal Pad in a Rat Model of Stress-Exacerbated Orofacial Pain

Cayla Clark  
Dr. Rhett Rigby  
SHPK

Comparison of cognitive performance following one hour of passive heating or walking in older adults

Anh Tuyet Le  
Dr. Vi Ho  
Nursing

Are Multidisciplinary Culturally Sensitive Community-Based Health Fairs Effective in the Underserved Vietnamese Americans?

Bailey Murray  
Dr. June Levitt  
Communication Sciences

Life-Story Development: Two Case Studies with Parkinson's Disease

Thi Diem Thuy Pham  
Dr. Xiaofen Du  
Nutrition & Food Sciences

Impact of Storage on Kernel Coat Color, Carotenoids, Polyphenols, and Physicochemical of Five Pecan Varieties

Behnaz Saghaei  
Dr. Kerri Staples  
SHPK

Are Fundamental Motor Skills More Impaired Among Children with Autism Spectrum Disorder than is Expected Based on IQ Scores?

Sheba Sajan  
Dr. Hui-Ting Goh  
Physical Therapy

Tracking Walking Recovery in Individuals with Motor Incomplete Spinal Cord Injury with Transcranial Magnetic Stimulation: Preliminary Findings

Christina Salazar  
Dr. Elizabeth Kaye  
Literacy and Learning

Interrogating the Barriers to Transformative Teaching: A  
CRNM Analysis of Autohistorias

Lia Schuermann  
Dr. Dundee Lackey  
LCGS

Practicing Digital Game Design in the Writing Classroom

Caroline W. Smith  
Dr. June Levitt  
COMS

Life Story Development: Two Case Studies with Parkinson's  
Disease

Rudie Spigarelli  
Dr. Rupal M Patel  
Physical Therapy

What Affects DPT Students' Sleep? A Study of the Status  
and Factors that Impact Sleep Quality of Doctor of Physical  
Therapy Students in the United States

Khushali Trivedi  
Dr. Mary Thompson  
Physical Therapy

Experiences of a Mother Living with the Pelvic Girdle Pain: A  
Qualitative Study

Tracy Tyner  
Dr. Wyona Freysteinson  
Nursing

Women's Mastectomy with Flat Closure Experiences

Nicole Varone  
Dr. B. Rhett Rigby  
SHPK

Anaerobic Performance During the Ovulation and Luteal  
Phases of the Menstrual Cycle

Juliza Vidales  
Dr. Jennifer Woo  
Nursing

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

Lindsey Walker  
Dr. JaNiece Elzy  
Literacy & Learning

Teachers' Perceptions of Running Records of African  
American Students

Eleonore Akuailou  
Dr. Helen B. Everts  
NFS

Effect of Dehydrogenase/reductase SDR Family Member 9  
(DHR9) on Skin Responses to Acute Ultraviolet Light B  
Exposure in Mice

Eileen Chung  
Dr. Patricia Stukes  
Multicultural Women's and Gender Studies

"Got a Sweet Asian Chick, She Go Lo Mein":  
Hypersexualization and Coalitional Possibilities for Black-  
Asian Solidarity through Hip-Hop Feminisms'

Parker Gutjahr  
Dr. Cynthia Warren  
NFS

Assessing College Students' Knowledge and Attitudes  
Towards Protein Using a Mixed-Methods Approach: The  
Dietary Protein Assessment Questionnaire (DPAQ)

Youjin Kim  
Dr. Brandi Falley  
Mathematics

The Correlation between Extroversion and Introversion of  
the Myer Briggs Type Indicator(MBTI) and Compatibility in  
the Measured Happiness of Married Individuals

Halima Kouadio  
Dr. Manal Rawashdeh-Omary  
Chemistry & Biochemistry

Environmentally Sustainable Routes Utilized to Produce  
New Copper Niacinamide Coordination Complexes

## Center for Student Research Annual Report AY 2022-2023

Kavitha Shankar  
Dr. Derek Miketinas  
NFS

Dietary Trends in Total Usual Intake of Vitamin C Using  
NHANES 1999–2018: A Curtain-Raiser to Dietary Intake  
Visualizers in Nutrition Research

Natalie Smith  
Dr. Zane Lybrand  
Biology

The Regulation of Neural Network Dynamics by Glial Cells in  
Brain Organoid Model of TBI

Anna Whitaker  
Dr. Christian Hart  
Psychology

Guilt and Shame Proneness as Predictors of Lying

Nadine Yasin  
Dr. Zane Lybrand  
Biology

Characterizing Single Cell RNA Sequencing of Cerebral  
Organoids in a Blast Traumatic Brain Injury Model

Kiran Hina Tajuddin  
Dr. Juliet Spencer  
Biology

Manipulation of CXCR4 by Human Cytomegalovirus

Briley Casserilla  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Monica Flores  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Antanasia DeWitty  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Chanel Henderson  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Kelly Gage  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Devin Bowens  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Daniel Prater  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Coral Parks  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

Lexie Lewis  
Dr. Danielle Woolery  
Music Division

TWU Clarinet Choir Performance

## Center for Student Research Annual Report AY 2022-2023

Ivy Deel Dr. Danielle Woolery Music Division	TWU Clarinet Choir Performance
Jacki McDaniel Dr. Danielle Woolery Music Division	TWU Clarinet Choir Performance
Megan Wright Dr. Danielle Woolery Music Division	TWU Clarinet Choir Performance
Dez Munoz Dr. Danielle Woolery Music Division	TWU Clarinet Choir Performance
Molly Keefer Dr. Danielle Woolery Music Division	TWU Clarinet Choir Performance
Dona Varghese Dr. Rhett Rigby SHPK	A Wearable device to Optimize Musculoskeletal Health
Kimhab Sor Dr. Rhett Rigby SHPK	A Wearable device to Optimize Musculoskeletal Health
Breandrea Diaz Dr. Rhett Rigby SHPK	A Wearable device to Optimize Musculoskeletal Health
Ramona Tovar Briones Dr. Rhett Rigby SHPK	A Wearable device to Optimize Musculoskeletal Health
Hunter Alvis Dr. Rhett Rigby SHPK	A Wearable device to Optimize Musculoskeletal Health
Hunter Alvis Dr. Rhett Rigby SHPK	Prevention of shoulder injury during EVA
Emma Becker Dr. Rhett Rigby SHPK	Prevention of shoulder injury during EVA
Nicholas Binayan Dr. Rhett Rigby SHPK	Prevention of shoulder injury during EVA
M. CortinasRodriguez Dr. Rhett Rigby SHPK	Prevention of shoulder injury during EVA

## Center for Student Research Annual Report AY 2022-2023

Lucia Creeden  
Dr. Rhett Rigby  
SHPK

Prevention of shoulder injury during EVA

Sofia Date  
Dr. Rhett Rigby  
SHPK

Prevention of shoulder injury during EVA

Ramona Tovar Briones  
Dr. Rhett Rigby  
SHPK

Prevention of shoulder injury during EVA

## 2022-2023 Student Research Publication Grants

Teresa Green  
Dr. Asha Vas  
Occupational Therapy

Examining the Delivery Mode of Mental Practice in  
Reducing Hemiparesis: A Randomized Control Trial