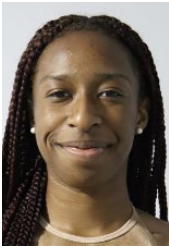




## Winthrop McNair Summer 2024 Research Presentations

12 Winthrop McNair Scholars will present their research projects on campus June 24, 2024. They will also present at the SAEOPP McNair/SSS Research Conference with students from all over the country. The high quality of their research is the result of the Scholars' work and their Mentors' support.

Here is the tentative agenda for the June 24<sup>th</sup> Symposium at the Shack.

Winthrop McNair Summer Research Symposium June 24th				
Time	Presenter	Title	Mentor	Type
1:00 PM	Dr. Cheryl Fortner	Welcome		
1:10 PM	Lidia Peralta	Phenotypic Analysis of Phage-Host Interactions	Dr. Victoria Frost	Oral
1:20 PM	Morgan Dukes	Exploring the Impact of Cd2+ on the Interaction Between Troponin-C and the Troponin-I Switch Peptide	Dr. Nicholas Grossoehme	Oral
1:30 PM	Cierra Ari Randolph	Exploring The Metal Dependence Between Troponin-C and the N-terminal Domain of Troponin-I	Dr. Nicholas Grossoehme	Oral
1:40 PM	Panel 1: Q & A and Break			Q&A
2:05 PM	Alexandra Cameron	Are The WNBA Roster Cuts A Detriment To The WNBA?	Dr. Jason Chung	Oral
2:15 PM	Timothy Speaks	The Perceived Barriers to Pursuing a Career in Medicine Among Black Male Physicians in the Southeast United States	Dr. Joanna Jackson & Prof. Larry Stevens	Oral
2:25 PM	Emory-Alexis Lewis	Consumer Knowledge of Overconsumption in the Clothing Industry and its Effects on Buying Behavior	Dr. Sara English	Oral
2:35 PM	Ty'teona Shannon	Deference to Prestige and Climate Change Policy	Dr. Jeffrey Sinn	Oral
2:45 PM	Panel 2: Q & A and Break			Q&A
3:10 PM	Ansley Coleman	What Are The Preventative Efforts Made by Juvenile Justice Practitioners To Keep Juveniles From Incarceration?	Dr. Bradley Tripp	Oral
3:20 PM	Grace Drolet	Relationships Between Mental Health Literacy and Help-Seeking Behavior Among Parent of Children Ages 5-12	Dr. Julie Orme	Oral
3:30 PM	Porsha Nesbitt	Priming Strengths Enhances College Students' Coping Efficacy and Emotion Regulation	Dr. Donna Nelson	Oral
3:40 PM	Jazlyn Wilson	Post-Traumatic Growth Following Childhood Challenges in Black and White Women	Dr. Merry Sleigh	Oral
Panel 3: Q & A - Poster Session and Break				Q&A
3:50 PM	Melissa Trejo	Hispanic/Latino/e Adults' Generational Transmission, Acculturation and Attitudes Toward Mental Health Resources	Dr. Merry Sleigh	Poster
4:20 PM	Concluding Remarks & Guests Depart			

	Scholar: <b>Alexandra Cameron</b>
	Mentor: <b>Dr. Jason Chung</b>
	Presentation Category: Business Type: Oral
	<b>Are The WNBA Roster Cuts A Detriment To The WNBA?</b>
<p><b>Abstract:</b> Following the 2023 WNBA Draft, former LSU Women's Basketball Player, Alexis Morris, was cut from the Connecticut Suns. Morris expressed her grievances publicly following the final decision of her dismissal. She took to X (formerly known as Twitter) writing her frustrations with a series of posts. Morris's claim was that the veteran players in the WNBA have taken valuable roster spots for young and fresh talent. To test Morris's assertion, this study will investigate the WNBA roster cuts from 2020 to 2023. Each roster will be analyzed for "Drafted Rookies" (in their respective draft year), rookie retention, and overall usage.</p>	
	Scholar: <b>Ansley Coleman</b>
	Mentor: <b>Dr. Bradley Tripp</b>
	Presentation Category: Social Science Type: Oral
	<b>What Are The Preventative Efforts Made by Juvenile Justice Practitioners To Keep Juveniles From Incarceration?</b>
<p><b>Abstract:</b> This research seeks to examine how Juvenile Justice Officers view their jobs and the young people they process. This research specifically seeks to better understand how and if American Juvenile Justice Officers approach their work with orientations towards preventative rather than punitive processes. Existing research asserts that a preventative orientation is underutilized. Our research will find if this is true in the everyday efforts of the officers interviewed. We conducted online interviews with eight officers from different departments in the state of South Carolina. We plan to apply criminological theory to the way officers conduct their procedures and treat children.</p>	
	Scholar: <b>Grace Drolet</b>
	Mentor: <b>Dr. Julie Orme</b>
	Presentation Category: Social Science Type: Oral
	<b>Relationships Between Mental Health Literacy and Help-Seeking Behavior Among Parent of Children Ages 5-12</b>
<p><b>Abstract:</b> With rising rates of youth anxiety, depression, and other mental disorders, children's mental health is a critical issue. Parents play a key role in managing their children's mental health, highlighting the need to understand their mental health literacy (MHL) and help-seeking behaviors. This mixed methods cross-sectional survey examined the relationship between parents' MHL and help-seeking behaviors. Results showed a significant positive correlation between MHL and help-seeking. These findings suggest that parents' MHL and help-seeking behaviors are related. Future research should examine the long-term effects of MHL interventions on help-seeking.</p>	

	Scholar: <b>Morgan Dukes</b>
	Mentor: <b>Dr. Nicholas Grosseohme</b>
	Presentation Category: Life Science Type: Oral
	<b>Exploring the Impact of Cd2+ on the Interaction Between Troponin-C and the Troponin-I Switch Peptide</b>
<p><b>Abstract:</b> Cd2+ is a toxic heavy metal known to negatively impact cardiovascular muscle function via a complicated mechanism that involves several proteins working synergistically to carry out and regulate the process. The troponin complex, composed of troponin-C, troponin-I, and troponin-T, serves as the link between brain signaling and muscle function. Upon nerve impulse, Ca2+ binds to troponin and signals muscle contraction. Recent evidence shows Cd2+ can bind to troponin in place of Ca2+. The aim of our research is to understand how Cd2+ impacts the interaction between troponin-C and the switch peptide region of troponin-I.</p>	
	Scholar: <b>Emory-Alexis Lewis</b>
	Mentor: <b>Dr. Sara English</b>
	Presentation Category: Humanities Type: Oral
	<b>Consumer Knowledge of Overconsumption in the Clothing Industry and its Effects on Buying Behavior</b>
<p><b>Abstract:</b> The popularity of the fast fashion industry has taken the world by storm. There are trends that appear just as quickly as they vanish, also known as fads. Behaviors associated with purchasing and discarding clothing affect the social and environmental conditions of everyone's lives. There is more to uncover about consumer trends regarding fast fashion. The purpose of this study is to explore the relationship between consumers, fast fashion, and consumer knowledge of where this endless waste is found. This study was conducted using a survey with a mixed methods approach. Findings will be shared following the analysis of data.</p>	
	Scholar: <b>Porsha Nesbitt</b>
	Mentor: <b>Dr. Donna Nelson</b>
	Presentation Category: Social Science Type: Oral
	<b>Priming Strengths Enhances College Students' Coping Efficacy and Emotion Regulation</b>
<p><b>Abstract:</b> This study explored strategies for enhancing college students' emotion regulation and coping. Participants wrote about a prior traumatic event. They were then randomly assigned to a control condition or a strengths intervention condition that raised awareness of personal strengths and highlighted their relevance to coping. Next, they completed emotion ratings and measures of coping self-efficacy. Results revealed that participants in the strengths intervention condition (compared to the control group) experienced less negative emotion and more positive emotion. They also reported greater self-efficacy in managing emotions and coping. These findings suggest that strengths-based interventions promote resilience of individuals with prior trauma.</p>	



Scholar: **Lidia Peralta**

Mentor: **Dr. Victoria Frost**

Presentation Category: Life Science  
Type: Oral

### **Phenotypic Analysis of Phage-Host Interactions**

**Abstract:** Bacteriophages are viruses that specifically infect bacterial hosts. They can also defend their host against invading phages in a phenomenon known as superinfection immunity. Genes from mycobacteriophage ExplosioNervosa were transformed into the bacterial host to test for this ability using a phenotypic assay. Of the nine genes selected, gp75 has shown a potential defense phenotype. We are particularly interested in gp75 as it is predicted to be an immunity repressor. These genes are known to keep phages in lysogeny, as well as aid in the defense of the host. Further testing is ongoing to help clarify phage gene functionality.



Scholar: **Cierra Ari Randolph**

Mentor: **Dr. Nicholas Grossoehme**

Presentation Category: Life Science  
Type: Oral

### **Exploring The Metal Dependence Between Troponin-C and the N-terminal Domain of Troponin-I**

**Abstract:** The troponin complex, composed of troponin-I, troponin-C, and troponin-T is an important regulatory component of muscle contraction. Through calcium signaling, it provides the link between brain activity and muscle function. However, it has been shown that the toxic heavy metal cadmium can also interact with the troponin complex. Our hypothesis is that the mechanism of cadmium toxicity is related to the interaction between troponin and metal. This project aims to understand the cadmium dependent interaction of the N-terminal domain of troponin-I and troponin-C and aims to investigate how this interaction impacts muscle contraction.



Scholar: **Ty'teona Shannon**

Mentor: **Dr. Jeffrey Sinn**

Presentation Category: Social Science  
Type: Oral

### **Deference to Prestige and Climate Change Policy**

**Abstract:** Self-enhancement values (Power and Achievement) can limit support for effective climate change policies. Such values may motivate a deference to prestigious economic elites who resist such policies. The present study examines three measures of deference to prestige as predictors of support for climate policies: a great man theory of economic progress, heroic economic individualism, and a deference to wealth in public policy discussions. We test these predictors of support for climate change policies against more established values measures using hierarchical regression.



Scholar: **Timothy Speaks**

Mentor: **Dr. Joanna Jackson**

Presentation Category: Business

Presentation Type: Oral

**The Perceived Barriers to Pursuing a Career in Medicine among Black Male Physicians in the Southeast United States**

**Abstract:** Black men make up less than 3% of physicians, decreasing the quality of care patients receive. This ongoing study investigates the influences of socioeconomic status and exposure to discrimination on Black men entering and completing medical school in the Southeastern U.S. This mixed methods study utilizes a concurrent triangulation design by conducting key informant interviews and a Qualtrics survey of physicians and current medical students. The study seeks to understand their experiences and perceptions of the lack of representation. Findings can be used to create programs that help increase the number of Black males in medicine.



Scholar: **Melissa Trejo**

Mentor: **Dr. Merry Sleigh**

Presentation Category: Social Science

Type: Poster

**Hispanic/Latino/e Adults' Generational Transmission, Acculturation and Attitudes Toward Mental Health Resources**

**Abstract:** Previous research suggests that Latino adults underutilize mental health resources. We compared the attitudes of Latino adults ( $n = 102$ ) born in the United States with those of their parents who immigrated to America. Participants reported more positive attitudes toward mental health resources than they believed their parents would. The higher their native and U.S. acculturation, the more receptive Latino adults were when the wording referred to mental health rather than to psychological problems. These findings suggest that societal experiences may be more influential than familial influences and add to the limited knowledge about the transgenerational attitudes of Latino adults.



Scholar: **Jazlyn Wilson**

Mentor: **Dr. Merry Sleigh**

Presentation Category: Social Science

Type: Oral

**Post-Traumatic Growth Following Childhood Challenges in Black and White Women**

**Abstract:** Previous research established a positive correlation between childhood trauma and post-traumatic growth. We investigated a specific type of trauma, parentification, when children are forced to take on adult responsibilities. Adult women ( $n = 91$ ) responded to an online survey. Black and White women experienced similar levels of trauma and parentification, with greater challenges leading to greater growth. However Black women experienced higher levels of post-traumatic growth and perceived more benefits of parentification. These findings offer a first insight into the potential for subsequent growth following parentification and emphasize that race can mediate women's reactions to trauma.

**Winthrop's Ronald E. McNair Postbaccalaureate Achievement (TRiO) Program** prepares juniors and seniors to be successful in PhD and other research-intensive doctoral programs. We serve outstanding first generation college students from low-income families and undergraduates from groups underrepresented in graduate education. Winthrop's program is funded through September 2028 by a five-year renewable TRiO grant from the U.S. Department of Education. \$272,364 in federal funding is provided each year for programming and materials that will help 30 eligible students prepare for graduate study. This represents 74% of program costs. Winthrop contributes the remaining 26% of the budget with approximately \$94,930 in cash and in-kind funds. To learn more about the program, please visit [www.Winthrop.edu/McNair](http://www.Winthrop.edu/McNair).

**In 2023-24, seven Winthrop McNair alumni earned doctorates;** one more defended her dissertation last week and another is set to defend later this summer. Seven of our thirteen 2023-24 graduates applied to and accepted offers from graduate programs; one more is applying now. Five of this year's graduates accepted doctoral program offers.

### **Program Outcomes Since Inception (2009)**

- Every year, 96-100% of McNair participants complete high quality research
- 97% of all McNair participants persisted to earn a Bachelor's Degree
- 84% of McNair graduates enrolled in graduate programs
- 75% of all McNair graduates persisted to earn at least one graduate degree
- 35 Doctorates and counting

### *Thank you*

**Scholars**, for rising to every McNair challenge and for supporting each other

**Mentors**, for helping your Scholar develop and pursue fascinating research questions and supporting them through every step this summer's intense research process and SAEOPP competition; Our Scholars are successful because of you.

**Dr. Matthew Hayes**, our Stats and Methods Coach, who taught and supported the Scholars' project design, statistical analyses, interpretation, and presentation development during the spring and summer.

**Stephanie Bartlett**, our Writing Coach, for supporting the Scholars' research and written works.

To the many experts who helped the Scholars succeed as summer researchers, learn how to give award winning presentations, and prepare to succeed in graduate study: **Dr. Jason Hurlbert, Dr. Gloria Jones, Cody Walters, Dr. Joni Boyd, Dr. Mike Sickels, Amanda Cavin, Dr. Jordan Lewis, Marian Moorer.**

To the folks who helped us get ready for this symposium: **Heather Carter, Phyllis Redden, Jerry Fussell, Dean Poole, the Amazing Facilities Team, Jill Stuckey, Angie Conner, and Richie Parrish.**

**Marian Moorer** (Program Assistant), **Shyanne Hamrick** (Graduate Associate), and **Amanda Cavin** (Programming Coordinator) for your constant support of our Scholars, the program, and its Director.

The **McNair Advisory Board** that identifies, selects, and supports outstanding first-generation college students from low-income families and undergraduates from underrepresented races and ethnicities with the potential to succeed in doctoral programs: **Dr. Victoria Frost, Rose Gray, Dr. Wenonah Haire, Dr. Jason Hurlbert, Dr. Joanna Jackson, Dr. Willis Lewis, Dr. Nicholas Moellman, Dr. Tenisha Powell, Dr. Karen Stock, Dr. Janet Wojcik, and Michelle Aguilar-Gaspar.**

It takes a village to pull this off. Just a few of the many folks we owe a deep debt of gratitude for stepping up to support the McNair summer researchers are **Dean Leigh Poole, Candace Bass, Jessica Peoples, Stephanie Mays Walker, Deborah Broome, Michelle Hare, Dawn Sayer, Michele Smith, Dr. Jeremy Lopuch, Dr. Jason Hurlbert, Victoria Balberde, Anna Triester, our Controller's office, Dean Takita Sumter, Dacus Library, and IT. Thank you!**