Welcome, 2021 McNair Cohort!

Samuel Aguilera-Robledo is a biochemistry major from Grand Island, Nebraska who is working with Dr. Jiri Adamec from the Department of Biochemistry.

Ma’Kiya Carter is a child, youth, and family studies major from Omaha, Nebraska who will be working with Dr. Cody Hollist from Child, Youth, and Family Studies.

Betty Dessie is a biological sciences major from Omaha, Nebraska who is conducting research with Dr. Michael Herman from the School of Biological Sciences.

Hailey Anderson is a physics major from Cedar Bluffs, Nebraska who will be working with Dr. Kevin Lee from the Department of Physics and Astronomy.

Emily Barajas is a psychology major from Omaha, Nebraska who will be conducting research with Dr. Eve Brank from the Department of Psychology.

Isis Burks is a psychology major from Lincoln, Nebraska who is conducting research with Dr. Jenna Finch from the Department of Psychology.

Ma’Kiya Carter is a child, youth, and family studies major from Omaha, Nebraska who will be working with Dr. Cody Hollist from Child, Youth, and Family Studies.

Darian Draft is a psychology major from Bellevue, Nebraska who will be conducting research with Dr. David Hansen from the Department of Psychology.

Clara Perez is a software engineering major from Omaha, Nebraska who is working with Dr. Brittany Duncan from Computer Science and Engineering.

Juan Silva is a physics major from Plainfield, Illinois who will be conducting research with Dr. Peisi Huang from the Department of Physics and Astronomy.

“True courage comes in enduring, persevering, and believing in oneself.”
– Ronald E. McNair, Ph.D.
We did not let the ongoing pandemic stop the 2021 McNair Summer Research Experience (MSRE). Summer 2021 may have had its challenges, but it was well worth it to our Scholars! After successfully completing their MSRE projects, we asked them to reflect on what it means to be a McNair Scholar, as well as on their summer research experience and presenting at the virtual National McNair Scholars Conference at UCLA. Some of their remarks are included on the following pages.

“I feel like I have learned and developed my own personal and professional skills in the field, lab, and in the overall research community because of this summer and the support system I was a part of. The support from McNair and my lab team has allowed me to be prepared to continue my research during the school year and beyond to be able to publish innovative research.” – Cleo Babor

“Overall, MSRE sets students like myself up for success through its plethora of amazing opportunities to improve our research and presentation skills and properly prepare for graduate school. I believe being in a diverse group like McNair allowed me to grow as a scholar and having other scholars with similar aspirations really allows conducive learning to occur.” – Seth Caines

“MSRE helped me experience the world of research at the graduate level. Even though I completed my research as an undergraduate student, the manner and attention to detail in which work is conducted is held to a higher standard. Research writing, for example, must be refined and exceptionally professional to present ideas and findings in a credible way. MSRE helped shape the way I will approach challenges in the future: with discipline, professionalism, and refinement.” – Noah Garcia

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“What this program did for me, was ensure me about my abilities and capabilities. It taught me to never limit yourself, and that skills are acquired through time and practice. Overall, I would say this summer molded me into a better student. I sharpened my critical thinking skills and extended my classroom learning. I really showed myself that I can do anything I put my mind to. This program gave me so much confidence in myself and empowered me not only as a student, but as a researcher as well.” – Jocelyn Covarrubias

“Overall, being a McNair Scholar has been the most rewarding experience in my college career. I learned a lot about myself and my capabilities. I learned that I do not necessarily need to go towards psychology to do the things I enjoy. I also learned that I could do a lot if I just believe in myself, and that failure is just a part of the process of doing. And lastly, I learned that I am capable of becoming a researcher.” – Evelyn Estrada Gonzalez

“Personally and professionally, I feel like I’m leaving this experience as a different person than I came in as, and that it is a wonderful change. I’m excited about research and my future within the field, as well as my future as both an undergrad and graduate student.” – Dorian Bobbett

“Gender Differences in Sexual Assault Survivors in PTSD and Alcohol Use
Jocelyn Covarrubias
Dr. Anna Jeffe
Department of Psychology
University of Nebraska-Lincoln
IN OUR Grit, OUR GLORY

“Promoting Parent-Child Interaction and Parenting Efficacy During Early Childhood: What Support Strategies are Used by Teachers During Home Visits?
Evelyn Estrada Gonzalez
Mentor: Lisa Knutze, PhD

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Thank you to the faculty, postdoctoral, and graduate student mentors who contributed their time and expertise to work with McNair Scholars during the 2021 McNair Summer Research Experience and who continue to support the Scholars’ research and graduate application efforts. Your support is invaluable to the success of our program!

“The biggest thing I’ve taken away from MSRE is a new sense of confidence and experience. Through grad school preparation and workshops, the research program itself, and having access to the program staff who answer questions can lend advice, I really feel like an entirely different person from one year ago. The McNair Program has helped me realize my potential.” – Bailey Mullins

“I felt like MSRE was a speed run for graduate school. I had the experience of doing rigorous research and presenting to my peers. It was gratifying to see the culmination of my efforts, shared with others in my field, and to see the overlaps of where our research could be helpful to society. Participating in the conference gave me the confidence I needed to continue working towards my dreams.” – Alyssa Simpson

“This experience has provided me with a confidence that will benefit me in any academic setting that I find myself in here on out. Even when I do reach my goal of getting into a clinical psychology Ph.D. program, I will be able to create new goals. I know that all the experiences I’ve had through McNair will help me in everything that I seek to do. McNair has been a life-changing experience.” – Josselyn Telule

“Coming into MSRE, I had doubts on whether I could take charge of a research project from the start to finish. I now understand the process of drafting a research proposal, creating a research design, collecting data, and performing data analysis. Then I learned how to use the raw data to create a meaningful research paper and presentation that added to the knowledge in the field.” – Khalid Yusuf

“To me, being a scholar in the McNair summer program was about gaining all the tools necessary to demystify the path to my academic and career goals, whether that was building a relationship with my mentor, practicing for the GRE, or conducting and presenting research in an effective manner.” – Daniel Nguyen


Haley Wittuhn, Psychology
Dr. Jana Fitch, Psychology Department
University of Nebraska-Lincoln

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“Affirming Psychotherapy for Transgender and Gender Diverse People: Understanding Affirming, Neutral, and Marginalizing Experiences in Therapy

Josselyn Telule
Sage Volk and Dr. Debra Hope
Department of Psychology
University of Nebraska-Lincoln

“Coming into MSRE, I had doubts on whether I could take charge of a research project from the start to finish. I now understand the process of drafting a research proposal, creating a research design, collecting data, and performing data analysis. Then I learned how to use the raw data to create a meaningful research paper and presentation that added to the knowledge in the field.” – Khalid Yusuf
Congratulations to December 2021 McNair Grads!

Aiah Nour  
B.S., Biochemistry  
Lincoln, Nebraska

Khalid Yusuf  
B.A., Psychology  
Omaha, Nebraska

2021-22 Postdoctoral & Grad Student Mentors

The McNair Graduate Student and Postdoctoral Mentoring Program offers our UNL McNair Scholars a supportive community, as well as advice, insight, and encouragement as they conduct research and prepare to enter graduate school. In turn, it offers our graduate mentors a chance to gain experience mentoring a rising scholar associated with one of the nationally-recognized Department of Education TRIO programs.

We’d like to welcome the 2021-22 McNair postdoctoral and graduate student mentors! They include: Kimia Akhavein, psychology; Sophia Becker, natural resource sciences; Allison Cipriano, psychology; Katie Mowat, civil engineering; Jonathan Niyorukundo, agronomy & horticulture; Spencer Pak, mechanical engineering; Meredith Sutton, civil engineering; Renata Trefiglio Mendes Gomes, child, youth, & family studies; Zvonimir Pusnik, biomedical engineering; Sage Volk, psychology; and Qiuchen Wu, physics & astronomy. They join continuing graduate mentors: Kyle Dougherty, natural resource sciences; Colton Harper, computer science; Boyang Hu, computer science and engineering; Nasrin Naderi Beni, civil engineering; Ekta Pandey, biochemistry; and Josey VanOrsdale, sociology.

Thank you for mentoring the next generation of graduate students!

Since the UNL McNair Scholars Program began in 1995, we’ve served 328 undergraduates. Excluding the continuing Scholars, 97.8 percent have earned their bachelor’s degree, 151 have earned master’s degrees, 53 UNL McNair Program alumni have achieved Ph.D.s, and 22 have earned professional degrees. Currently, 25 UNL McNair alumni are enrolled in Ph.D. programs, 15 are pursuing master’s degrees, and 4 are pursuing professional degrees.
Scholars Awarded 2021-22 Research Grants

For the 2021-22 Academic Year, 19 UNL McNair Scholars received research funding from the Undergraduate Creative Activities and Research Experiences (UCARE) Program, as well as from other departmental funding.

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<th>Scholar</th>
<th>Project Title and Faculty Research Advisor</th>
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| Samuel Aguilera-Robledo      | **UCARE Project:** Understanding Metabolic Interactions between the Brain and Liver.  
**Faculty Mentor:** Jiri Adamic, Department of Biochemistry                                               |
| Cleopatra Babor              | **UCARE Project:** The Breeding of Novel Colored and High Protein Quality Popcorn and Sweet Corn Varieties.  
**Faculty Mentor:** Dr. David Holding, Agronomy & Horticulture                                            |
| Dorian Bobbett               | **UCARE Project:** Engineering Faculty Experience During Emergency Remote Teaching: A Case Study.  
**Faculty Mentor:** Dr. Grace Panther, Civil & Environmental Engineering                                    |
| Isis Burks                   | **UCARE Project:** Associations Between Children's Executive Functions and Academic Success: The  
Moderating Role of Parents' Self Regulation.  
**Faculty Mentor:** Dr. Jenna Finch, Psychology                                                            |
| Seth Caines                  | **UCARE Project:** Are Microplastic Fibers Usually Found in Textiles Prevalent in Nebraska Freshwater Bodies?  
**Faculty Mentor:** Dr. Shannon Bartelt-Hunt, Civil & Environmental Engineering                           |
| Jocelyn Covarrubias          | **UCARE Project:** Gender Differences of Men and Women Sexual Assault Survivors: An Examination of PTSD and Alcohol Use.  
**Faculty Mentor:** Dr. Anna Jaffe, Psychology                                                               |
| Betty Dessie                 | **UCARE Project:** Investigating the age-dependent role of DAF-16-mediated immunity during S. malophilia infection.  
**Faculty Mentor:** Dr. Michael Herman, School of Biological Sciences.                                      |
| Zoe Erickson                 | **UCARE Project:** Assessing Project SAFE Effectiveness: Impact of Gender on Symptom Severity for Sexually Abused Youth.  
**Faculty Mentor:** Dr. David Hansen, Psychology                                                              |
| Evelyn Estrada Gonzalez      | **UCARE Project:** The Well-Being and Parenting Behaviors of Parents in Early Childhood.  
**Faculty Mentor:** Dr. Lisa Knoche, Center for Research on Children, Youth, Families & Schools             |
| Noah Garcia                  | **UCARE Project:** An Examination of the Flanker Effect in Virtual Reality.  
**Faculty Mentor:** Dr. Carl Nelson, Mechanical & Materials Engineering                                       |
| Mohammad Majid               | **NSF funded Project:** Investigation of Protection Failure Methods in WDM and Elastic Optical Networks.  
**Faculty Mentor:** Dr. Byrav Ramamurthy, School of Computing                                               |
| Bailey Mullins               | **UCARE Project:** Analyzing the Data of the Central Nebraska Irrigation Project to Find if Reduction in Water Pumping has Occurred.  
**Faculty Mentor:** Dr. Trenton Franz, School of Natural Resources                                           |
| Daniel Nguyen                | **UCARE Project:** LGBTQ+ People of Color's Experiences of Community Bias and Discrimination,  
Identity Integration, and Well-Being.  
**Faculty Mentor:** Dr. Cynthia Willis-Esqueda, Psychology                                                   |
| Clara Perez                  | **UCARE Project:** Understanding When, What, and How to Communicate with Unmanned Aerial Vehicles.  
**Faculty Mentor:** Dr. Brittany Duncan, School of Computing                                               |
| Clarice Santos               | **MHD Project:** Mediators of Violence Exposure and Substance Use (MoVES).  
**Faculty Mentor:** Dr. Arthur R. Andrews, Psychology                                                       |
| Alyssa Simpson               | **UCARE Project:** Constructing Novel van der Waals Heterostructures for High Performance Nanoelectronics.  
**Faculty Mentor:** Dr. Xia Hong, Physics & Astronomy                                                      |
| Josselyn Telule              | **UCARE Project:** Affirming Psychotherapy for Transgender and Gender Diverse People: Understanding Affirming, Neutral, and Marginalizing Experiences in Therapy.  
**Faculty Mentor:** Dr. Debra Hope, Psychology                                                               |
| Serigne Toure                | **UCARE Project:** The Effect of Adding or Removing Constraints from a Reinforcement Learning Machine to find the Optimal Solution.  
**Faculty Mentor:** Dr. Stephen Scott, School of Computing                                                  |
| Haley Witthuhn               | **UCARE Project:** Associations Between Self-Reported Intrinsic Motivation and Challenge Preference in Second Graders.  
**Faculty Mentor:** Dr. Jenna Finch, Psychology                                                               |
McNair Scholars disseminated their research findings at local, regional, and national virtual conferences during Summer and Fall 2021.


Seth Caines – Caines, S., Bartelt-Hunt, S. (2021, August). Are microplastic fibers that are usually found in textiles prevalent in Nebraska Freshwater bodies? Poster presented at the 2021 Nebraska Summer Research Virtual Symposium, University of Nebraska–Lincoln, Lincoln, Nebraska.

Caines, S., Bartelt-Hunt, S. (2021, August). Are microplastic fibers that are usually found in textiles prevalent in Nebraska Freshwater bodies? Poster presented at the College of Engineering Summer Undergraduate Research Fair, University of Nebraska-Lincoln, Lincoln, Nebraska.

Caines, S., Bartelt-Hunt, S. (2021, July). Are microplastic fibers that are usually found in textiles prevalent in Nebraska Freshwater bodies? Oral presentation at the 2021 National McNair Scholars Virtual Conference at UCLA, University of California–Los Angeles, Los Angeles, California.

Caines, S., Bartelt-Hunt, S. (2021, July). Are microplastic fibers that are usually found in textiles prevalent in Nebraska Freshwater bodies. Oral presentation at the 2021 McNair Summer Research Virtual Colloquium, University of Nebraska–Lincoln, Lincoln, Nebraska.

Jocelyn Covarrubias – Covarrubias, J. G., Jaffe, A. (2021, August). Gender Differences in Sexual Assault Survivors: An Examination of PTSD and Alcohol Use. Nebraska Summer Research Symposium, University of Nebraska–Lincoln, Lincoln, Nebraska.


Covarrubias, J. G., Jaffe, A. (2021, July). Gender Differences in Sexual Assault Survivors: An Examination of PTSD and Alcohol Use. Oral presentation at the 2021 McNair Summer Research Virtual Colloquium, University of Nebraska–Lincoln, Lincoln, Nebraska.


2021 Virtual Conference Presentations


Santos C. (2021, September). Differences in Positive and Negative Affect among rural Persons Who Inject Drugs (PWIDs) in Puerto Rico who are in and out of Treatment. Oral Presentation. 9th Annual International Virtual Conference of Undergraduate Research.


Alyssa Simpson – Simpson, A., Wu Q., Wang K., Hong X. (2021, August). Ferroelectric domain studies of free-standing PbZr0.2Ti0.8O3 (PZT) membranes. Poster presented at the 2021 Nebraska Summer Research Virtual Symposium, University of Nebraska–Lincoln, Lincoln, Nebraska.

Simpson, A., Wu Q., Wang K., Hong X. (2021, July). Ferroelectric domain studies of free-standing PbZr0.2Ti0.8O3 (PZT) membranes. Oral presentation at the 2021 National McNair Scholars Virtual Conference at UCLA, University of California–Los Angeles, Los Angeles, California.

Simpson, A., Wu Q., Wang K., Hong X. (2021, July). Ferroelectric domain studies of free-standing PbZr0.2Ti0.8O3 (PZT) membranes. McNair Summer Research Virtual Colloquium, University of Nebraska–Lincoln, Lincoln, Nebraska.


Congratulations to Brianna McKay (McNair Scholar 2015-17) who recently earned an advanced degree! After earning a master's degree in nutrition and health sciences from the University of Nebraska–Lincoln in August 2019, Brianna McKay earned a master of physician assistant studies from Creighton University in December 2021. She is currently a physician assistant in the Pediatric Intensive Care Unit at University of South Alabama Women’s and Children’s Hospital in Mobile, Alabama.