

# THE SLU MCNAIR RESEARCH JOURNAL

Summer 2020, Vol 3



Saint Louis University



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Made possible through a grant from the U.S. Department of Education to Saint Louis University, the Ronald E. McNair Post-Baccalaureate Achievement Program (McNair Scholars Program) is a TRIO program that prepares eligible high-achieving undergraduate students for the rigor of doctoral studies. These services are also extended to undergraduates from Harris-Stowe State University, Washington University in St. Louis, Webster University, University of Missouri St. Louis and Fontbonne University.

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## MESSAGE FROM THE DIRECTOR



Greetings from SLU McNair!

We are happy to present the third volume of our online research journal, which highlights the work of five outstanding scholars who completed the 2020 McNair Summer Research Internship Program. This year, we experienced a summer internship program like no other; the COVID-19 pandemic necessitated the creation of an 8-week virtual summer research experience instead of an on-campus one. Thanks to a dedicated team of staff members, careful planning, and unwavering leadership, we successfully navigated our way through previously uncharted terrain.

We are thankful to the McNair Faculty Mentors who supervised the research of the summer interns, as well as our workshop facilitators, who contributed greatly to the success of the internship program. Special thanks to McNair Academic Coordinator Anthony D. Parker-Gills for the outstanding execution of our team's strategic planning, and to Sunita Manu, Erica McBride and Sadita Salihovic for the excellent academic instruction and support they each provided our interns. Without such a solid and capable team professionals, it wouldn't have been possible to provide the quality of programming that took place over the summer.

Last but certainly not least, thank you to William Perkins, Director of Pre-College, Access & TRIO Programs, without whom none of this would have been possible, and our editorial intern, Bella Caley, for assisting Sunita Manu with the development this year's research journal.

Sincerely,

*Jamie D. Motley*

Jamie D. Motley, Ph.D.

McNair Scholars Program Director



Greetings McNair Scholars, Faculty and Staff,

Our 2020 Summer Research Internship was like no other but through it all you persevered. During this summer, we got the opportunity to see our scholars grow as students, researchers and professionals. For eight weeks, our scholars worked on their research projects with their faculty mentors and participated in countless workshops and seminars. During this summer, we also got the opportunity to learn more about our scholar's research interest, goals and passions. It was also a joy to work with Dr. Jamie Motley, Sunita Manu, Erica McBride, Sadita Salihovic and all of our faculty mentors, without you none of this would be possible. Lastly, I am so proud of our Summer Research Interns, let this journal be a testament to all your hard work.

Sincerely,

*Anthony Parker-Gills*

McNair Scholars Academic Coordinator

## LIST OF 2020 MCNAIR SCHOLARS

- ❖ Tinuola Adebukola
- ❖ Fatima Al-Hanoosh
- ❖ Beth Asnakew
- ❖ Miguel Campos
- ❖ Hope Conyers
- ❖ A'liyah Fleeks
- ❖ Tekahla Flint
- ❖ Sydney Jackson
- ❖ Dietrich Olibrice
- ❖ Adnane Rahali
- ❖ Mya Robinson
- ❖ Rossana Sandoval
- ❖ Vanessa Sarmiento

## MCNAIR STAFF



### **Jamie D. Motley, Ph.D.**

*Program Director*

Dr. Jamie D. Motley first began working in TRIO as a graduate student at the University of Illinois at Urbana-Champaign, where she earned her Master's Degree in Higher Education Administration and Ph.D. in Educational Policy Studies. She has held leadership positions at multiple colleges and universities in Illinois, Georgia, Alabama and Missouri. Dr. Motley began her tenure at Saint Louis University in 2014 as a member of the TRIO Student Support Services staff and was promoted to McNair Scholars Program Director in the fall of 2017. In addition to her graduate degrees, she holds a Bachelor of Arts Degree in Journalism from Western Illinois University.

### **Anthony D. Parker-Gills, MSW**

*Academic Coordinator*



Anthony Gills joined the McNair Scholars Program staff in November of 2017. Prior to that, he was a Relationship Manager, Post-Secondary Prep at Big Brothers Big Sisters of Eastern Missouri. He was also a practicum student with TRIO Student Support Services, as well as the TRIO Educational Talent Search Program at Saint Louis University. Anthony has a Bachelor of Arts in Criminology & Criminal Justice from Southern Illinois University-Carbondale and a Master of Social Work from Saint Louis University. He is currently pursuing a Ph.D. in Higher Education Administration. As the academic coordinator for McNair, Anthony provides academic and personal support to McNair Scholars, assisting with program-related projects and activities, coordinating workshops and monitoring each Scholar's participation and success in the program.



### **Sunita Manu, MPH, CPH**

*Graduate Assistant*

Sunita Manu became part of the McNair Scholars Program in September of 2018. She is a first-year PhD student at St. Louis University College for Public Health and Social Justice. Prior to McNair, Sunita was an assistant with L'Arche St. Louis where she worked with individual with intellectual disability. As the graduate assistant for the McNair Scholars program, Sunita oversees the Gateway to McNair Scholars Program, provides academic and personal support to scholars, assist scholars with completing their college application, and help with event planning.

## ***Fatima Al-Hanoosh***



Fatima Al-Hanoosh is from St. Louis, MO and is currently a senior at Saint Louis University studying biomedical engineering. Within biomedical engineering, she is particularly interested in neuroengineering. Her motivation and passion for neural engineering arises from the ability of those in this field to advance the health of society through innovation and creativity. She hopes to one day apply her knowledge of the most fascinating and intricate system of the body, to advance the field in the same way as those who have preceded her. Currently, she is working with Dr. Hiroko Yano at Washington University School of Medicine to study the mechanism of Huntington's disease progression by focusing on a specific protein called DNMT3A. She aspires to go on to graduate school to study neural tissue engineering, focusing primarily on achieving successful reconstruction and functional recovery of spinal cord injury through stem cell therapy.

## ***Beth Asnakew***



Born and raised in St. Louis, MO, Beth Asnakew is a senior at Washington University in St. Louis. She is a part of the Philosophy-Neuroscience-Psychology (PNP) program, an interdisciplinary program that provides an opportunity to examine the mind from a variety of perspectives. Within this field of study, she found her interest in the biological underpinnings of the mind and decided to pursue a degree in cognitive neuroscience. Her enthusiasm for the social, political, and intellectual history of people of African descent led her to pursue a minor in African and African American Studies. This summer, she had the privilege of working with Dr. Alaina Baker-Nigh for her research under McNair's Scholars internship. They investigated the effects of caffeine on neurite growth and development by observing neuronal morphology. In view of how widely caffeine is utilized around the world, particularly among young adults, Beth believes it is important to examine both the benefits and adverse effects of this drug. The current study aims to consider the cellular responses to caffeine treatment on primary rat cortical neurons through cell culture techniques. Due to the recent outbreak of COVID-19, all aspects of this study were completed virtually.



## *Miguel Campos*

Miguel Campos is a junior at Washington University in St. Louis, pursuing a Bachelor of Science degree in chemistry with a concentration in biochemistry while minoring in materials science and engineering. He is a first-generation college student born and raised in the city of Chicago, IL. He has always been interested in the hard sciences, discovering his passion for chemistry all the way back in high school. He is intrigued with the unlimited potential of what we as a society can do if we embrace and further explore the field of chemistry. Miguel plans on pursuing a PhD in either chemistry or biochemistry. He has the privilege of working with Dr. Marvin J. Meyer, focusing on the ever-present fight against cryptococcal meningitis. Current laboratory work is being done to help narrow down potential lead compounds that will be tested for their fungicidal properties and their affinity to serotonin neuroreceptors, with the end goal being to maximize the effectiveness of the intended purpose of the drug while also minimizing any undesired side effects.



## *Hope Conyers*

Hope Conyers is a senior from Belleville, Illinois at Saint Louis University studying communication sciences and disorders with plans to attend graduate school in the Fall of 2021 to become a Speech-Language Pathologist. Hope's passion is to conduct more cognitive research and provide a voice to future clients. She is also interested in researching cognitive disorders and is currently researching the effects of chemotherapy on language when treating breast cancer patients. Due to the COVID-19 pandemic, her protocol has had changed significantly, but she is still paving the way with her undergraduate work. There is no person to person contact with this study as it is being done online and remotely to keep everyone safe. This includes solicitation of participants, interviewing and testing.

## ***Tekahla Flint***



Tekahla Flint is a junior at Harris-Stowe State University in St. Louis, Missouri. She is majoring in Biology with a concentration in Pre-Medicine. As a first-generation college student, Tekahla has always wanted to further her education and be an asset to society, thus sparking her interest in obtaining a Ph.D. in Nursing. This summer Tekahla has been granted the pleasure to participate in Saint Louis University's McNair Summer Internship working on research alongside her notable mentor Dr. Devita Stallings. This 8-week program has been a true life-changer; especially adapting to a virtual atmosphere that has brought her out of her comfort zone and helped shape her individuality. There could have been a no better experience to set the foundation for her future plans in research and education.