Summer 2021 McNair Scholars

Bethlehem Abebe
Marcy Balunas, Ph.D., Pharmaceutical Sciences: Medicinal Chemistry
Analysis of host-microbe symbionts through the study of comparative metabolomics and genomics of closely related Leisingera strains to predict fungal growth inhibition against Candida albicans

Briana Nosal
Ock Chun, Ph.D., Nutritional Sciences
Impact of coffee consumption on urinary estrogenic chemical exposure

Christopher Alvarez-Pani
Arash Zaghi, Ph.D., Civil and Environmental Engineering
The repair of steel bridge girders with ultra high-performance concrete

Derek Lefcort
Helena Silva, Ph.D., Electrical and Computer Engineering
Temperature dependent characterization of GST225 using multi-wavelength ellipsometry

Ethan Lazaro
Benjamin Fuller, Ph.D., Computer Science and Engineering
Randomness assessment in physical hardware

Fiona Liu
Ashley M. Helton, Ph.D., Natural Resources and the Environment
How do Nitrous Oxide greenhouse gas emissions vary among groundwater seeps?

Grissy Sime Mora
Douglas Casa, Ph.D., Kinesiology
Metabolic heat production and perceived cold in extreme cold environments

Juan Colberg-Martinez
Charles Giardina, Ph.D., Molecular and Cell Biology
Studying the anti-inflammatory effects of a novel antifolate compound in the treatment of rheumatoid arthritis using RA-FLS cells

James Roberts
Ramesh Malla, Ph.D., Civil and Environmental Engineering
Stress and deformation on a pressurized dome lunar structure under various depths of regolith cover

Jude Icoy
Karen Menuz, Ph.D., Physiology and Neurobiology
Identifying novel pheromone taste receptors
Kasidy Quiles
Dennis D’Amico, Ph.D., Animal Science
*The effect of sub-inhibitory concentrations of antimicrobials on virulence gene expression in Listeria monocytogenes*

Lavar Johnson
Valerie Duffy, Ph.D., Allied Health Sciences
*Mixed method analysis of serious gaming for health promotion in young children and adolescents*

Lexie DeMarco
Cara Battersby, Ph.D., Astrophysics
*Exploring the effect of observational parameters on the Core Mass Function (CMF) in molecular clouds*

Myra Cerrato
Stephanie Milan, Ph.D., Clinical Psychology
*COVID-19 vaccine hesitancy in mothers: U.K vs U.S comparison*

Neel Chakravartty
Ramesh Malla, Ph.D, Civil and Environmental Engineering
*Humidity analysis on possible conditions within a lunar habitat*

Nichali Bogues
Alfredo Angeles-Boza, Ph.D., Chemistry
*Enhancing the bactericidal efficiency of antimicrobial peptides through the conjugation of Ru(II) complexes*

Nolan Murphy-Genao
Kelly Burke, Ph.D., Chemical and Biomolecular Engineering
*Synthesis of Poly(ethylene terephthalate)*

Pablo Zarama
Jasna Jankovic, Ph.D., Materials Science and Engineering
*Developing UV sensors and actuators using environmentally-friendly carbon nanofibers*

Paulo Belato
Stacey L. Hanlon, Ph.D., Molecular and Cellular Biology
*Influence of B chromosomes on gene expression in the Drosophila melanogaster germline*

Shenelle Shaw
Anastasios Tzingounis, Ph.D., Physiology and Neurobiology
*Does Dyrk1a phosphorylate KCNQ2 channels?*

Shihab Khalfalla
Caiwen Ding, Ph.D., Computer Science and Engineering
*Deep Reinforcement Learning for UAVs*

Shihao Zhai
Kristina Wagstrom, Ph.D., Chemical and Biomolecular Engineering
*Designing a portable particulate matter monitor*
Shirley Guo
Kenneth Campellone, Ph.D., Molecular and Cell Biology
Identifying the impact of the Arp2/3 complex on cellular senescence signaling pathways

Suzannah de Almeida
Gregory Sartor, Ph.D., Pharmaceutical Sciences:
Pharmacology and Toxicology
Novel epigenetic treatment for opioid use disorder

Ted Akuffo
Eric Jackson, Ph.D., Civil and Environmental Engineering
Self-driving cars: A study analyzing recent alert systems looking to improve driver attentiveness

SUMMER PROGRAM COMPONENTS
❖ 8-week on-campus research-intensive, graduate school preparatory experience
❖ Mentorship by McNair Scholar alumni and STEM Ph.D. students
❖ Elevator pitch, mock interview, mindfulness calendar, and financial literacy workshops
❖ Thorough revision of research-focused resume and statement of purpose documents for graduate school applications
❖ 1:1 progress check-ins
❖ GRE strategy workshops and practice exams
❖ STEM graduate program visits via Zoom
❖ “A day in the life with my research project” video creation and presentation
❖ Research poster presentation
❖ Nationwide civic engagement “Good Trouble” TRiO program book club
❖ Career readiness discussions for high school students
❖ Game nights

Thank you, faculty mentors, and all research mentors of the McNair Scholars!