

LSUMARC Newsletter

Fall 2021



2021-2022 MARC Scholars

LSU MARC Welcomes Scholars

Message from the Director



I am so excited about all the accomplishments of our students during the first year of the LSU MARC program despite the COVID pandemic. This past year was challenging, but with the support of our mentors and sponsors, MARC students continued to develop their research skills and advance their career goals. As we start to return to normal, we look forward to expanding our conference travel and in-person activities. Geaux Tigers!

Graça Vicente, Ph.D.
Director, Maximizing Access to Research Careers (MARC) Program
Charles H. Barré Distinguished Professor of Chemistry

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MARC Scholar Profiles

2021-2022

Iyana Charles, Senior

Major: Kinesiology, **Minor:** Entrepreneurship

Faculty Mentor: Dr. Mandi Lopez, Professor and Director Laboratory for Equine and Comparative Orthopedic Research, LSU School of Veterinary Medicine

Research Topic: Quantification of the motion of the equine hoof capsule with special shoes designed to treat damaged hoof tissue

Macallister Davis, Junior

Major: Chemistry

Faculty Mentor: Dr. Victor Garcia-Lopez, Assistant Professor, LSU Department of Chemistry

Research Topic: Artificial molecular machines to interrogate and modulate cell function

Sarah Delhaye, Junior

Major: Biological Engineering

Faculty Mentor: Dr. Dorin Bolder, Professor, LSU Department of Biological and Agricultural Engineering

Research Topic: Lignin separation from biomass using alternative technologies and green solvents

Alexa Gonzales, Junior

Major: Microbiology

Faculty Mentor: Dr. Jeremy Brown, Professor, LSU Department of Biological Sciences

Research Topic: Evolution and biodiversity of SARS-CoV-2 genomes

Mia Goodson, Senior

Major: Psychology, **Minor:** Leadership

Faculty Mentor: Dr. Paul Soto, Assistant Professor, LSU Department of Psychology, Pennington Biomedical Research Center

Research Topic: Effects of antipsychotic medications on weight gain in mice

Alejandra Ham, Senior

Major: Biological Engineering

Faculty Mentor: Dr. Elizabeth Martin, Assistant Professor, LSU Department of Biological and Agricultural Engineering

Research Topic: Effects of fiber orientation and porosity on progression of breast cancer

Sarah Jimenez, Junior

Major: Biological Engineering

Faculty Mentor: Dr. Philip Jung, LSU Department of Biological and Agricultural Engineering

Research Topic: Engineering biomaterials for tissue regeneration

Aaryana Jones, Senior

Major: Biological Sciences

Faculty Mentors: Dr. Alexandra Noel, Assistant Professor, Comparative Biomedical Sciences, LSU School of Veterinary Medicine

Research Topic: Chemical biology of anti-cancer agents; Respiratory effects caused by emerging inhaled environmental pollutants

Calli Nguyen, Senior

Major: Biological Sciences

Faculty Mentor: Dr. Fatima Rivas, Assistant Professor, LSU Department of Chemistry

Research Topic: Identification of compounds against glucocorticoid resistant leukemia cell models

Oluwatobi Ojemakinde, Junior

Major: Biological Sciences, **Minor:** Spanish

Faculty Mentor: Dr. Craig Hart, Professor, LSU Department of Biological Sciences

Research Topic: Investigating Drosophila BEAF insulator protein roles in transcription: promoter activation and mediation of long-range enhancer-promoter communication

Zoe Patton, Junior

Major: Chemistry

Faculty Mentor: Dr. Isiah Warner, Boyd Professor, LSU Department of Chemistry

Research Topic: Evaluation of healing properties of magnetic ionic liquids

Chelbye Turner, Junior

Major: Chemistry

Faculty Mentor: Dr. Isiah Warner, Boyd Professor, LSU Department of Chemistry

Research Topic: Synthesis of organic salts

Kiara Warren, Senior

Major: Psychology

Faculty Mentor: Dr. Alex Cohen, Associate Professor, LSU Department of Psychology

Research Topic: Language analysis of populations with severe mental disorders

Summer Research Experiences

This past summer, the first cohort of MARC scholars conducted research at an extramural site to further develop their research skills and foster personal and career development. The SRE 2 experience formally connects MARC scholars with mentors, research projects, and potential graduate programs at other institutions

Iyana Charles

Dr. Rodolphe J. Gentili, School of Public Health, University of Maryland

Aayana Jones

Dr. Girish Melkani, NIH PARAdiGM Summer Program, The University of Alabama at Birmingham

Mia Goodson

Dr. Leanne Redman, Women's and Childrens Health Lab at LSU Pennington Biomedical Research Center

Calli Nguyen

Dr. Bolin Liu, Stanley S. Scott Cancer Center, LSU Health Science Center, New Orleans

Alejandra Ham

Dr. William Stanley Anderson, Johns Hopkins University School of Medicine

Kiara Warren

Dr. Kyle Minor, Indiana University–Purdue University Indianapolis

“College can be an overwhelming experience when you're wrapping up your time in university, because you could be faced with deadlines from conferences, classes, publications, etc. MARC provides a great community that lends the support of peers and mentors that can help you navigate the workload effectively.” - Kiara Warren, LSU MARC Senior



Scholar Publication

Alejandra Ham

Matossian MD, Chang T, Wright MK, Burks HE, Elliott S, Sabol RA, Wathieu H, Windsor GO, Alzoubi MS, King CT, Bursavich JB, **Ham AM**, Savoie JJ, Nguyen K, Baddoo M, Flemington E, Sirenko O, Cromwell EF, Hebert KL, Lau F, Izadpanah R, Brown H, Sinha S, Zabaleta J, Riker AI, Moroz K, Miele L, Zea AH, Ochoa A, Bunnell BA, Collins-Burow BM, Martin EC, Burow ME. In-depth characterization of a new patient-derived xenograft model for metaplastic breast carcinoma to identify viable biologic targets and patterns of matrix evolution within rare tumor types. *Clin Transl Oncol* (2021). <https://doi.org/10.1007/s12094-021-02677-8>

MARC Leadership Team

Graça Vicente, Ph.D.
Director, Maximizing Access to Research Careers (MARC) Program
Charles H. Barré Distinguished Professor of Chemistry

Isiah M. Warner, Ph.D.
Vice President of Strategic Initiatives
Boyd Professor of Chemistry

Tyrslai Williams-Carter, Ph.D.
Director of Research, Education, & Outreach Programs

Gretchen Schneider, Ph.D.
MARC Manager

Gabela Nelson
MARC Graduate Student, supported by the LSU College of Science

Mahannah El-Farrah
MARC Graduate Student, supported by the College of Human Sciences & Education.

Presentation Awards

LSU MARC Scholar **Iyana Charles** received 1st place for the College of Human Sciences and Education Monetary Award at the 2021 LSU Discover Day Symposium.

LSU MARC Scholar **Aaryana Jones** received a poster award at the 2020 Annual Biomedical Research Conference for Minority Students (ABRCMS) and 3rd place in the undergraduate poster competition at the South Central Chapter - Society of Toxicology 2021 Conference.



MARC Scholar Aaryana Jones

Conference Presentations

Iyana Charles

LSU Discover 2020

Macallister Davis

ABRCMS 2021

Mia Goodson

LSU Discover 2020

Alejandra Ham

LSU Discover 2020

Sarah Jimenez

GCURS- Rice University, 2021

Aaryana Jones

ABRCMS 2020

LSU Discover 2020

Society of Toxicology -South Central Chapter 2021

Calli Nguyen

SACNAS 2020

LSU Discover 2020

Zoe Patton

LSU Discover 2020

ABRCMS 2021

Oluwatobi Ojemakinde

ABRCMS 2021

Chelbye Turner

LS-PAC Model Conference

Kiara Warren

LSU Discover 2020

2021 Society for Affective Science

2021 Society for Research in Psychopathology



MARC has given me the opportunity to explore and develop myself in the world of research. It is a great program with many caring and supportive people. My advice for future researchers: Find a topic you're passionate about and run with it!"

- Macallister Davis, LSU MARC Junior

Upcoming Events/Conferences

Emerging Researchers National Conference in STEM - Washington, D.C. | February 3-5, 2022

National Conferences on Undergraduate Research- virtual | April 4-8, 2022

LSU Discover Day - Student Union | Friday, April 22, 2022

LSUMARC

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