



# Department of Chemistry, Physics, Geology, & the Environment Student Research Accomplishments (2019-2022)

## Peer-Reviewed Publications (\*Undergraduate student co-author)

- Harris, C.; Gaster, C.;\* Gelabert, M. C. Reverse Micelles as Templates for the Fabrication of Size-Controlled Nanoparticles: A Physical Chemistry Experiment *Journal of Chemical Education* **2019** 96(3), 565-570.
- Ngyuen, D. K.\*; Schepisi, I. M.\* ; Amir, F. Z. Extraordinary cycling stability of Ni<sub>3</sub>(HITP)<sub>2</sub> supercapacitors fabricated by electrophoretic deposition: Cycling at 100,000 cycles. *Chemical Engineering Journal* **2019** 378, 122150.
- Manley, O. M.\*; Myers, P. D.\*; Toney, D. J.\*; Bolling, K.F.\*; Rhodes, L. C.\*; Gasparik, J. L.\*; Grosseohme, N. E. Evaluation of the regulatory model for Ni<sup>2+</sup> sensing by Nur from *Streptomyces coelicolor*. *Journal of Inorganic Biochemistry* **2019** 110859.
- Wechsler, S. C.\*; Amir, F. Z. Superior Electrochemical Performance of Pristine Nickel Hexaaminobenzene MOF Supercapacitors Fabricated by Electrophoretic Deposition. *ChemSusChem* **2020**, 13(6), 1491-1495.
- Butler, K. J.\*; Castro, A. A.\*; Dwyer, T. S.\*; Hardwick, L. M.\*; Iacino, M. C.\*; Manore, S. G.\*; Mays, K. M.\*; McGlade, C. A.\*; Hair, L. N.\*; Parker, E. W.\*; Smith, M. R.\*; Turnow, M. T.\*; Wilson, M. R.\*; Woodson, S. R.\*; Cotham, W. E.; Walla, M. D.; Hurlbert, J. C.; Grattan, T. C. Design, synthesis and analysis of novel sphingosine kinase-1 inhibitors to improve oral bioavailability. *Bioorganic & Medicinal Chemistry Letters* **2021**, 50, 128329.

## Student Presentations at National Conferences (\*Undergraduate student co-author)

- Campbell, B.\*; Shope, D.\*; Werts, S. P. Remote Sensing and Decomposition Rates of Forest Succession Plots in the Piedmont of South Carolina. American Geophysical Union Fall Meeting, San Francisco, CA. **2019**.
- Wechsler, Sean;\* Amir, Fatima. High Performance supercapacitors based on pristine nickel hexaaminobenzene MOF electrodes. 259<sup>th</sup> National Meeting of the American Chemical Society, Philadelphia, PA, **2020**.
- Kaminski, C. A.\*; Leszczak, A.; E.\*; Boyer, D. L., The impacts of renourishment and grain size on microplastic abundance in Carolina beach sands, Geological Society of America Abstracts with Programs. Vol 53, No. 6, doi: 10.1130/abs/2021AM-365806, Portland OR, **2021**.
- Carter, E.\*; Carbon, T.\*; Boyer, D. L. Evaluation of Marine Communities Before and After the Late Devonian Biocrisis: Great Basin, USA, Geological Society Of America Abstracts with Programs, vol. 54, no. 5, Denver, CO **2022**..

## Student Presentations at Regional Conferences (\*Undergraduate student co-author)

- Wechsler, S.\*; Amir, F. Facile fabrication of pristine nickel hexaaminobenzene (Ni<sub>3</sub>(HIB)<sub>2</sub>) metal-organic framework supercapacitor electrodes via electrophoretic deposition. 71<sup>st</sup> Southeastern Regional Meeting of the American Chemical Society, Savannah, GA, **2019**.
- Grattan, T. C.; Butler, K. J.\* Sphingosine kinase inhibition using modified variants of a sphingosine kinase inhibitor. 71<sup>st</sup> Southeastern Regional Meeting of the American Chemical Society, Savannah, GA, **2019**.
- Ellison, B. W.\*; Perez, A. T.\*; Outten, F. W.; Grosseohme, N. E. Measuring heat related to the dissociation and reformation of ferritin using isothermal titration calorimetry. 71<sup>st</sup> Southeastern Regional Meeting of the American Chemical Society, Savannah, GA, **2019**.
- Thibodeaux, E. H.\*; Ciesa, B. E.\*; Hanna, J. M. Jr. Photoredox-mediated alkylation of imines with potassium organotrifluoroborates in the presence of an organic photocatalyst. 71<sup>st</sup> Southeastern Regional Meeting of the American Chemical Society, Savannah, GA, **2019**.
- McCloskey, B.\*; Harris, C. Multi-step electrodeposition of p-type metal chalcogenides as components of water splitting tandems- 71<sup>st</sup> Southeastern Regional Meeting of the American Chemical Society, Savannah, GA, **2019**. Due to COVID-19 travel restrictions, students were not allowed to travel and present at Regional Conferences in **2020**.
- Quetel, M. A.\*; Hanna, J. M. Jr. Visible-Light Promoted Alkylation of Imines in the Presence of an Organic Photocatalyst. Southeastern Association of Educational Opportunity Program Personnel (SAEOPP) McNair/Student Support Services (SSS) Scholars Research Conference, Atlanta, GA, June, **2021** (Virtual).
- Walters, E. J.\*; Hurlbert, J. C. Expression, Purification, and Characterization of GeneM: A Novel Virulence Factor of the Phytopathogen *Clavibacter michiganensis*. Southeastern Association of Educational Opportunity Program Personnel (SAEOPP) McNair/Student Support Services (SSS) Scholars Research Conference, Atlanta, GA, June, **2021** (Virtual)
- Quarles, J. D.\*; Livingston, A. T.\*; Wood, A. E.\*; Fernandez, T.G. Using Tetracycline-Binding Nucleic Acid Aptamers as Trojan-Horse Tetracycline Delivery Vehicles in the Fight against Drug-Resistant Bacteria 67. Academic Leadership and Career Development Workshop, June, **2022**.
- Quetel, M. A.\*; Hanna, J. M. Jr. Reaction of Hydrazones with Potassium Organotrifluoroborates Through Photoredox Catalysis. Southeastern Association of Educational Opportunity Program Personnel (SAEOPP) McNair/Student Support Services (SSS) Scholars Research Conference, Atlanta, GA, June, **2022**.
- Quetel, M. A. ;\* Hanna, J. M. Jr. Visible-Light Promoted Alkylation of Imines in the Presence of an Organic Photocatalyst. South Carolina IDeA Network of Biomedical Research Excellence (INBRE) Scientific Symposium, Columbia, SC, January, **2022** (Virtual).

## External Summer Research Fellowships

Jackson Barrett (2021) *University of North Carolina Charlotte*

## Internal Summer Research Fellowships

Allen, Ashley (2020)	Dr. Werts
Barrett, Jackson (2020/2022)	Dr. Hanna/Drs. Calloway & Gelabert
Bendure, Hannah (2022)	Dr. Grattan
Bonikowski, Kyla (2022)	Dr. Hurlbert
Brooke, Jewell (2021)	Dr. Hurlbert
Burke, Mikayla (2020)	Dr. Werts
Butler, Kendarius (2021)	Dr. Grattan
Carbon, Terrance (2022)	Dr. Boyer
Carter, Edward (2022)	Dr. Boyer
Claxton, Kendall (2020)	Dr. Hanna
Donohue, Meagan (2021)	Dr. Gelabert
Dunn, Christine (2020 & 2021)	Dr. Hurlbert
Ellison, Brandon (2021)	Dr. Fernandez
Fritsch, Samantha (2021)	Dr. Grosseohme
Gonzalez, Thomas (2022)	Dr. Fernandez
Halderman, Alexandra (2022)	Dr. Boyer
Hancock, Savannah (2022)	Dr. Harris
Hunter, Morgan (2022)	Dr. Fernandez
Johnson, Kameron (2020/2021)	Dr. Gelabert
Kaminski, Camille (2021)	Dr. Boyer
Kopyc, Casey (2022)	Dr. Hanna
Lang, Emmaline (2020)	Dr. Grattan
Leszczak, Aubrey (2021)	Dr. Boyer
Lewis, Jomar (2021)	Dr. Grattan

Lightfoot, Veda (2021/2022)	Dr. Grosseohme
Livingston, Allen (2020/2021)	Dr. Fernandez
Massey, Janae (2021 & 2022)	Dr. Harris
McCall, Kierra* (2022)	Dr. Fernandez
Miller, Courtney (2021)	Dr. Grosseohme
Nguyen, Darien (2019)	Dr. Amir
Patel, Priya (2022)	Dr. Hurlbert
Quarles, Joshua (2021 & 2022)	Dr. Fernandez
Quetel, Molly (2020 to 2022)	Dr. Hanna
Read, Austin Ford (2020/2022)	Dr. Amir/Dr. Calloway
Rowell, Abigail (2022)	Dr. Werts
Schlueter, Marcus (2022)	Dr. Hanna
Shoemaker, Jennifer* (2022)	Dr. Hartel
Smith, Sybil* (2022)	Dr. Grattan
Stegall-Smith, Mary (2022)	Dr. Hanna
Stewart, Emily (2022)	Dr. Grattan
Sullivan, Thomas (2020 & 2021)	Dr. Fernandez
Thibodeaux, Evan (2020/2021)	Dr. Hanna/ Dr. Amir
Walters, Eric (2020/2021)	Dr. Hanna/Dr. Hurlbert
Wechsler, Sean (2019)	Dr. Amir
Wernsman, Ryan (2022)	Hanna
White, Jamia* (2022)	Dr. Grosseohme
Willier, Jacob (2022)	Dr. Amir
Wood, Ashley (2021 & 2022)	Dr. Fernandez

## Students Matriculating into Graduate Programs

Dunn, Christine (2022)	St. Jude Children's Research Hospital	School of Biomedical Sciences
Dwyer, Tiffany S. (2020)	Purdue University	Dept. of Medicinal Chemistry & Molecular Pharmacology
Gasparik, Danielle (2020)	Belmont University	School of Pharmacy
Johnson-Cooper, Destinee (2022)	Clemson University	Department Engineering & Science
Leistikko, Lillian (2022)	University of North Carolina	School of Pharmacy
McAnally, J. R. (2020)	Medical University of South Carolina	School of Medicine
McCloskey, Blake A. (2020)	Clemson University	Department of Chemistry
Odom, Cayla M. (2020)	Dental College of Georgia	School of Dentistry
Petty, Alyssa B. (2020)	Wingate University	School of Pharmacy
Quay, Juliana (2020)	Vanderbilt University	School of Medicine
Schneider, Katrina M. (2020)	Winthrop University	Master of Teaching Education
Thibodeaux, Evan Hayes (2021)	Clemson University	Department of Chemistry
Tran, Nghi Ngoc Phuong (2021)	University of Nevada, Las Vegas	School of Dental Medicine
Nguyen, Darien K. (2020)	University of Delaware	Department of Engineering
Travis, Lauren (2019)	Wingate University	School of Pharmacy
Wechsler, Sean C. (2020)	University of South Carolina	Department of Chemistry & Biochemistry

## Student Awards and Recognitions

ACS Carolina Piedmont Section Award – Undergraduate Research	Sean Wechsler (2020); Brandon Ellison (2021)
ACS Organic Division – Winthrop Undergraduate Award	Sean Wechsler (2020)
Undergraduate Analytical Chemistry Award – ACS	Meagan Donohue (2021)
SOURCE Award	Eric Walters (2021)
Inez Bell Caskey Student Scholar Award – Undergraduate Research	Sean Wechsler (2020); Christine Dunn (2022)
NC Photochem Award (runner-up)	Evan Thibodeaux (2019)
SAEOPP McNair/SSS Scholars Research Conference Award	Cayla Odom (2019); Molly Quetel (2021 & 2022)