

The Mosaic

Issue 7 | June 2021



Welcome



We made it to Summer 2021, IMSD family!

The past 12 months have been nothing less than an emotional roller coaster for so many in our community and in the world at large. In the span of a year, we experienced a terrifying global pandemic, racial and social justice unrest, a nerve-wracking election season, as well as the rollout of several ground-breaking COVID-19 vaccines. Oh, what a year it has been! Despite these highs and lows, our IMSD family continues to excel through their innovative research, advocacy, and initiatives aimed at supporting and empowering members of our community.

In this latest issue of The Mosaic, we are celebrating scientific accomplishments as well as our collective grit and dedication to increasing diversity, equity, and inclusion in biomedical sciences. We applaud the efforts and triumphs of our members who continue to defy the odds and we assure you that we see you; we value you and we are proud of you! So IMSD family, join us in honoring these incredible achievements! Lastly, please help us welcome the 2021 PREP, SOLAR, SURE, and BBSP cohorts!

Keep on striving and inspiring,

Team IMSD Newsletter

Upcoming Events

IMSD Bootcamp Aug. 2-6

BBSP Preview Weekend Sept. 16-18





PhinishedD: Fall/Spring 2020-2021 Graduates!



Yael-Natalie Escobar, PhD
"Propylene Glycol and Glycerol, The Unlikely Culprits: A Study of the Biological Effects of Electronic Cigarette Generated Aerosols on Airway Epithelial Cells"
September 18, 2020
PI: Dr. Ilona Jaspers



Adelaide Tovar, PhD
"Dissecting respiratory responses to ozone exposure with genetics and genomics"
February 17, 2021
PI: Dr. Samir Kelada



María Luisa Torruella Suárez, PhD
"The Role of Central Amygdala Neurotensin Neurons and Their Projections to the Parabrachial Nucleus in the Consumption of Alcohol and Palatable Fluids"
March 23, 2021
PIs: Dr. Zoe McElligot



Tia Morgan, MS
"Defining the Role of the ATR DNA Damage Response Pathway During the Life Cycle of HPV"
April 22, 2021
PI: Dr. Cary Moody



Karel Alcedo, PhD
"CD73 is a Critical Regulator of Hepatocytes in Homeostasis and Disease"
April 6, 2021
PI: Dr. Natasha Snider

Kaye Alcedo has served as editor for "The Mosaic" since its inception in the Spring of 2018. In addition to being an exceptional scientist, Kaye is also a talented artist. Her creativity and desire to recognize the accomplishments of her colleagues has been instrumental to shaping the newsletter into what it is today! It has been such a pleasure to work with you and we thank you for your leadership, Kaye!

Congratulations PREP11!

Congratulations to PREP11 as they take on their next research adventure in graduate school around the country.

Zipporah Bush (Albert Einstein College of Medicine); Megan Colie, Kwame Forbes, Lindsey Hernandez, Priscila Santa Rosa, and Cynthia Thomas (UNC Chapel Hill); Rubén García-Reyes (Washington University); Kaitlin Giffin (University of Michigan); Joshua García Colón (Johns Hopkins University).

They presented their final research work on May 25th during the PREP symposium. This event was held in person in MBRB G202 and virtually via zoom.

Stay tuned for information on the PREP12 cohort. The new students were welcomed on June 7th, and have begun their research work with BBSP-affiliated faculty members!



IMSD Scholars in Outreach and Professional Development

LaKeya Hardy (Burks lab) founded and is the Co-director of the HBCU-Bridge Summer Research Opportunity Program in the Microbiology & Immunology department. She also performed an EPA Internship, Collaborative Scholarship, Education and Training Project with National STEM Leaders mentored by Dr. Beka Layton.

Danielle Chapell (Damania lab) received the Pharmacology graduate student scholar award. In addition to her award, Danielle has actively sought out additional experiences outside of lab. She completed the ORAQ Regulatory Affairs Training Program training course at Duke, and the Inspiring Meaningful Programs & Communication Through Science (IMPACTS) teaching certificate program offered through Moorehead Planetarium. Danielle is also an Executive programming board member of MSL@UNC Career Cohort through TIBBS.

Keith Rogers (Jaspers lab) was elected as the graduate student representative of the North Carolina chapter of SOT. He received the Donald E. Garner Inhalation Toxicology Education Award from the Inhalation and Respiratory Specialty Section of Society of Toxicology (SOT). Keith used this award to start the "New Respiratory Toxicology Coach Series", a program that enables collaborations between UNC and Oakwood University, a small HBCU. The goal is to enhance the research development and experience and and of both PI's and students at Oakwood University in inhalation toxicology in collaboration with a large tier 1 research institution.

Alina Hamilton (Hoadley and Troester labs) was selected as a 2021 recipient of the UNC Graduate Education Advancement Board Horizon award.

Juanita Limas (Cook lab) and **Zayna King** (Bear lab) were selected for the TIBBS Immersion Program to Advance Career Training (ImPACT) program and will be completing internships in industry. Juanita is also the 2021 recipient of the Boka W. Hadzija Award for Distinguished University Service.

IMSD Scholars in Conferences

Jamshaid Shahir (Purvis lab) presented on "Single cell Trajectory Inference in the Cell Cycle Using Iterative Indirect Immunofluorescence Imaging Data" at the Virtual Keystone Symposia Single Cell Biology.

Tamara Vital (Davis lab) and **Carmen Marable** (Fry lab) presented their work in the form of e-posters/graphical abstracts at the Translational Medicine symposium and won audience choice.

Kwame Forbes (Love lab), **Kaitlin Giffin** (Besheer lab), **Megan Colie** (Deshmukh lab) presented at ABRCMS alongside their PREP cohort and received Outstanding Presentation awards.

Eva Vitucci (McCullough lab) presented her work titled "Identifying the Mechanisms of Air Pollution Induced Cardiovascular Disease" at the American Society for Cellular and Computational Toxicology (ASCCT), Genetics and Environmental Mutagenesis Society (GEMS), and SOT annual meetings. Eva received a host of awards for her work and presentations: Ed Carney Predictive Toxicology Award from ASCCT, 3rd Place Graduate Student Poster Award at GEMS, the Sheldon D. Murphy Student Endowment Award from the Mechanisms Specialty Section of SOT, 3rd place Graduate Student Research Award from the Molecular and Systems Biology Specialty Section of SOT, and the Mary Amdur Student Award from the Inhalation and Respiratory Specialty Section of SOT.

Awards & Fellowships

NRSA Individual Predoctoral Fellowship (F31)
Alina Hamilton (Hoadley and Troester labs)

NIH Diversity Supplement
Danielle Chapell (Damania lab)

Graduate School Horizon Award
Alina Hamilton (Hoadley and Troester labs)

Burroughs Wellcome Fund Graduate Diversity Enrichment Program STEM Outreach Supplemental Award
LaKeya Hardy (Burks lab)

Boka W. Hadzija Award for Distinguished University Service by a Graduate or Professional Student
Juanita Limas (Cook lab)



Christian Agosto Burgos (Falk lab), **Brea Hampton-Brown** (Heise and Ferris labs), **Danielle Chapell** (Damania lab). Christian spoke with Univision 40 North Carolina (twice!) about vaccine efficacy and SARS-CoV 2 strains. Brea has actively using her platform, to present accurate COVID-19 information for the public and spoke on a podcast about COVID-19 and vaccine development process. Danielle co-hosted a UNC podcast on COVID misinformation and bias.



Publications



Biochemistry & Biophysics

Martinez NG, Thieker DF, Carey LM, Rasquinha JA, Kistler SK, Kuhlman BA, Campbell SL. Biophysical and Structural Characterization of Novel RAS-Binding Domains (RBDs) of PI3K α and PI3K γ . *J Mol Biol.* 2021 Apr 16;433(8):166838. doi: 10.1016/j.jmb.2021.166838. Epub 2021 Feb 1. PMID: 33539876; PMCID: PMC8005443.



Bioinformatics & Computational Biology

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Cell Biology & Physiology

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Chemistry

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Genetics & Molecular Biology

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Microbiology & Immunology

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Pharmacology

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Publications



Pathobiology &
Translational
Science

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Toxicology &
Environmental
Medicine

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