DUKE STEM
Diversity & Inclusion
Retreat 2019

June 7th – 9th, 2019
YMCA Blue Ridge Assembly, Black Mountain, NC

“Filtering the Noise: Maintaining Your Focus Through Chaos & Distraction”
STEM D&I Retreat
Committee and Sponsors

Paige Cooper, PhD
Program Director
Duke BioCoRE Program

Hiedi Ibraimov
Staff Assistant
Duke BioCoRE Program

Johnna Frierson, PhD
Director, Office of Diversity and Inclusion
Adjunct Assistant Professor of Engineering

J. Alan Kendrick, PhD
Assistant Dean for Graduate Student Development
Retreat Objectives and Goals

Things to consider during the retreat weekend….

**Enjoy yourself!** The retreat is designed to be a relaxed setting where you can expect to a lot of personal growth, but also take time to kick back a bit!

**Engage others.** You can gain a lot from the other students here—extend yourself and get to know them.
Step outside of the box and talk to someone you haven’t before!

**Rest.** The free time is intended to provide an opportunity for you to unwind and escape from the rigors of lab and other life commitments. Don’t miss out on this opportunity!

**Participate fully.** The speakers hold high levels of knowledge in their fields and are eager to share their insight with you. Take advantage of their willingness to share their time and talent.

**Keep things confidential.** We want this to be a safe space for all students to share and grow, and we should all respect individual privacy and boundaries.

This retreat is meant to serve your needs and enhance your graduate school experience. Please keep notes of all questions and suggestions for next year’s event!
Agenda

Friday, June 7th

10:00-11:00am  Meet & Load Bus. Depart Duke Univ.
                Blue Zone 7 on Wannamaker Dr. (first paved lot on the left off Duke University Dr.)

11:00-2:30pm   Travel to Black Mountain, NC
                Boxed Lunch on bus and snacks

2:30-3:30pm    Arrival at YMCA Blue Ridge & Check-in
                84 Blue Ridge Circle, Black Mountain, NC, 28711

3:30-4:00pm    Unpack Bags

4:00-5:00pm    Ice Breakers
                Meet outside main building

5:00-6:00pm    Free Time

6:00-7:00pm    Dinner
                Blue Ridge Center Dining Hall

7:30-10:00pm   Bonfire With Smores
Agenda

Saturday, June 8th

8:00-9:00am  Breakfast
Blue Ridge Center Dining Hall

9:00-9:15am  Welcome

9:15-9:35am  Getting to Know You
Dr. Johnna Frierson

9:35-10:30am  Interactive Workshop

10:30-10:45am  Coffee Break

10:45-11:25am  Faculty Speaker
Dr. Adrienne Stiff Roberts

11:25-12:25pm  Student Research Talks

Emma Bonglack- “The Role of Monocarboxylate Transporters 1 and 4 in EBV-driven Tumorigenesis.”

Ha Na Choe- “Sex & Drugs & Rock & Roll: Birds & Song.”

Daniela Cruz- “Ultrabright Fluorescence Readout of an Ink-Jet Printed Immunoassay Using Plasmonic Metasurfaces.”

Imari Walker Karega- “The Impact of Carbon Nanotubes (CNT) and Ultraviolet Light on the Release of Polymer Additives from their Microplastic Matrices into the Environment.”

## Agenda

### Saturday, June 8th – Sunday, June 9th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>12:30-1:15pm</td>
<td>Lunch</td>
<td>Blue Ridge Center Dining Hall</td>
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<tr>
<td>1:15-2:15pm</td>
<td>Alum/Career Workshop</td>
<td>Dr. Ariana Eily</td>
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<tr>
<td>2:30-5:30pm</td>
<td>High Ropes Course or Free Time</td>
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<tr>
<td>6:00-6:45pm</td>
<td>Dinner</td>
<td>Blue Ridge Center Dining Hall</td>
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<tr>
<td>7:00-8:00pm</td>
<td>Keynote Speaker</td>
<td>Dr. Corey Welch</td>
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<tr>
<td>8:00pm- Until</td>
<td>Free Time/Socializing</td>
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### Sunday, June 9th

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00-8:45am</td>
<td>Breakfast</td>
<td>Blue Ridge Center Dining Hall</td>
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<tr>
<td>9:00-9:45am</td>
<td>Faculty Speaker</td>
<td>Dr. Everardo Macias</td>
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<td>9:45-10:15am</td>
<td>Survey</td>
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<tr>
<td>10:15-10:30am</td>
<td>Closing Remarks</td>
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<tr>
<td>10:30-11:00am</td>
<td>Check-out &amp; Load Bus</td>
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<tr>
<td>11:30-1:30pm</td>
<td>Asheville for Lunch and Exploring</td>
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<td>1:30-5:00pm</td>
<td>Arrive at Duke Univ.</td>
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Corey Welch, PhD is Director of the STEM Scholars Program at Iowa State University. He started at Iowa State in January 2015 to establish a new Science training program serving underrepresented students. His career goal is to diversify who succeeds in science, to benefit both STEM disciplines and our larger society. A native of Billings, Montana, he’s a proud member of the Northern Cheyenne tribe, and a first generation college graduate. He was inspired to pursue a career in biology after spending his childhood in his grandfather’s pickup truck on the red-dirt roads of the Northern Cheyenne reservation. His formal biology training is in ecology and evolution with an emphasis on population biology and genetics of birds and mammals. Previously, he taught several years at Haskell Indian Nations University in Lawrence, KS. Prior to Iowa State, he was the Research Program Coordinator for a large (~500 students) biological sciences program: the Biology Scholars Program at UC Berkeley where he coordinated a variety of different research training programs funded by HHMI and NIH grants. Professionally, he is involved with the National Society for the Advancement of Hispanics/Chicanos and Native American Scientists (SACNAS) attending his first conference in 1998. In 2012, he participated in the Linton-Poodry and Advanced SACNAS Leadership Institutes (LP-SLI and ALI) and subsequently, developed the framework of what has become the STEM Scholars Program. Since 2016, he has served as a facilitator/lecturer at the LP-SLI hosted by AAAS and in 2018, served as a facilitator for the ALI SACNAS Leadership Programs. In 2016, he was elected for a 3-year term on the Board of Directors of SACNAS as the Secretary-elect.
Dr. Adrienne Stiff-Roberts, PhD, Professor of Electrical and Computer Engineering

Dr. Stiff-Roberts received both the B.S. degree in physics from Spelman College and the B.E.E. degree in electrical engineering from the Georgia Institute of Technology in 1999. She received an M.S.E. in electrical engineering and a Ph.D. in applied physics in 2001 and 2004, respectively, from the University of Michigan, Ann Arbor, where she investigated high-temperature quantum dot infrared photodetectors grown by molecular beam epitaxy. Dr. Stiff-Roberts joined Duke University in August 2004, and she is a Professor of Electrical and Computer Engineering.

Dr. Everardo Macias, PhD, Assistant Professor of Pathology at Duke University

Dr. Macias is a cancer biologist with an overarching goal of deciphering the molecular mechanisms responsible for tumor development and progression. My objective is to uncover novel signaling pathways and expand on those implicated in cancer in order to aid in the development of improved therapeutic and preventative strategies. To date my studies have largely utilized transgenic and genetically targeted mouse models in order to investigate all aspects of tumorigenesis (i.e. initiation, promotion and progression).
Ariana Eily, PhD
Postdoctoral Associate
Science Communication
Duke Initiative for Science & Society

Ariana Eily, PhD is a postdoctoral associate in Science and Society, focusing on science communication. She is interested in the intersection between art and science, or STEAM, and in developing ways science can be more deeply connected to society. This includes leading an interdisciplinary team exploring STEAM initiatives at Duke, using improv to help scientists become better communicators, creating courses to expand our thinking about how science and society interact, and establishing a science-art exhibit called the Art of a Scientist. Her PhD work was a crowd-funded project focused on uncovering the mechanisms of nutrient exchange in the intricate symbiosis between the small aquatic fern, Azolla, and its obligate nitrogen-fixing cyanobacterium, Nostoc azollae. An alumna of Rollins College, she has long had a passion for making science more inclusive, and a large part of her dedication to science communication and STEAM is that they open the door to making science accessible to everyone.
Johnna Frierson, PhD
Director, Office of Diversity and Inclusion
Adjunct Assistant Professor of Engineering

Johnna Frierson, PhD is the founding Director of the Office of Diversity and Inclusion in the Pratt School of Engineering at Duke University. In addition, she serves as the co-principal investigator of the Research Experience for Undergraduates program for Meeting the Grand Challenges in Engineering awarded by the National Science Foundation in March 2017. A native of Rock Hill, SC, she received her bachelor’s degree in Biology at Furman University, and PhD in Microbiology and Immunology at Vanderbilt University where she studied the role of sialic acid binding in reovirus neuropathogenesis under the direction of Dr. Terence Dermody. Her professional interests and expertise lie in examining and identifying solutions to challenges at the intersection of STEM, education, and diversity. Dr. Frierson translates this expertise into developing innovative programs and initiatives to enhance recruitment and retention of students and faculty from underrepresented backgrounds, support student development, cultivate an academic and professional environment that is inclusive and welcoming, and expand community outreach to inspire the next generation of STEM scholars.
STUDENT RESEARCH TALKS

Daniela Cruz  
Biomedical Engineering  
Mikkelsen Lab  
Sixth Year

Imari Walker Karega  
Civil & Environmental Engineering  
Ferguson Lab  
Third Year

Ha Na Choe  
Molecular Genetics & Microbiology  
Jarvis & Matsunami Lab  
Sixth Year

Emma Bongulack  
Pharmacology  
Luftig Lab  
Second Year

Khari Johnson  
Biomedical Engineering  
Jennifer West Lab  
Second Year
Map of YMCA Blue Ridge

CAMPUS LEGEND

YMCA BLUE RIDGE ASSEMBLY  (828)669-8422  www.blueridgeassembly.org