



August 9, 2012

The [Office for Undergraduate Research](#) newsletter is published two times per month to share news about undergraduate research at UNC, relevant events, accomplishments of our students and faculty, and more. For additional information, please visit our website at www.unc.edu/depts/our or email us at our@unc.edu.

Announcements and OUR News

OUR Blog:

- [Summer Research Spotlight on Amber Giffin](#)

GRC Blog:

- [Reflections on My Experience as a GRC in Philosophy](#)
- [A GRC Rides Into the West](#)

OUR People:

- Meet three [OUR Ambassadors](#)
- Have you seen the latest issue of the [Carolina Alumni Review](#)? Their profiles of 2012 graduates include: Katie Joa, an [HHMI Future Scientist and Clinician](#) and [Carolina Research Scholar](#); Reed Turchi, a [SURF recipient](#); and Kiri Sunde who, along with Joa and Turchi, presented at the 2012 [Celebration of Undergraduate Research](#).

OUR Programs:

- Are you interested in taking a research-exposure course supported by a Graduate Research Consultant? Learn more about the [GRC program](#) and check out our [preliminary list of courses for fall 2012](#). This list will continue to grow until the semester begins.
- First Year Students: It's not too late to register for one of the new [Howard Hughes Medical Institute Science Seminars](#).
- We're pleased to announce the revival of the [Graduate Student Mentor Award](#). If you're a graduate student involved in mentoring undergraduates, check out the requirements and apply.

OUR Events:

- The [Howard Hughes Medical Institute Future Teachers](#) final presentations.
- The OUR Ambassadors will be tabling at [Fall Fest](#). Stop by the table to learn more about OUR and pick up your laptop sticker!

Other Events and News:

- The [McNair Scholars](#) Poster Session
- [Responsible Conduct of Research](#) (RCR) training is now available free of charge. Read Vice Chancellor Barbara Entwisle's [memorandum](#), which stresses the importance of RCR training in creating a culture of excellence at Carolina.

Announcements and OUR News:

[Summer Research Spotlight on Amber Giffin](#)

Read about 2012 SURF recipient Amber Giffin and her work exploring how the Eastern Band of Cherokee Indians uses music and arts to teach history.

[Reflections on My Experience as a GRC in Philosophy](#)

GRC Jim Sias talks about helping students learn how to write a philosophy paper and strengthen their critical thinking skills.

[A GRC Rides Into the West](#)

GRC Aaron Shackelford discusses the collegial relationship with his GRC Faculty and how it facilitated student learning and his professional development.

Meet three [OUR Ambassadors](#):

Keia Faison, junior Biology major, Chemistry minor:

I started my research journey with OUR in the summer before my freshman year in 2010 through the [Duke Energy Biosciences Scholar \(DEBS\) Program](#). I spent at least 20 hours per week over the course of 8 weeks shadowing and participating in research under my undergraduate SMART mentor Michelle Ajumobi, my graduate mentor Alice Pilo, and my Principal Investigator Dr. Gary Glish. We focused on the CID of Sodiated Peptides using Tandem Mass Spectrometry. The next summer I, myself, became a [Science and Math Achievement and Resourcefulness Track \(SMART\) scholar/mentor](#).



SMART provides opportunities for undergraduate and graduate students in the STEM disciplines. I was able to work a lot more independently in the Chemistry Department under the direction of my graduate mentor Michael Tycon, and my faculty advisor Dr. Christopher J. Fecko. Our lab explores the physical properties of biological systems using microscopy techniques. Overall, we wish to develop a greater understanding of the impact of the cellular environment. In addition to my independent project investigating the effects of fluorescent YOYO-1 dye on DNA under single-molecule conditions, I was able to mentor another DEBS student.



Darrius Jones, senior Psychology major, Japanese minor: I have had quite a bit of experience with undergraduate research so far. In the summer of 2010 I worked for eight weeks in a chemistry lab that looked at the effects of drug addiction on neurotransmitters. I'm currently involved in a social neuroscience research lab on Duke's campus. We ran a study that examined how people treat someone they don't know compared to how they treat someone in a clear outgroup. Also, I'm working on a study that seeks to see if animal lovers make the social cognition errors (i.e. stereotyping) towards animals as they do towards humans.

Mallory Anne Melton, junior Archaeology and American Studies (American Indian Studies Concentration) major, Information Systems minor:
My research focuses on the functions, forms, and trade patterns of tobacco pipes in southeastern North America during the Mississippian and Early Colonial periods. My current project, made possible by a SURF grant, involves the study of two sandstone formations potentially utilized for the manufacture of effigy pipes during the Mississippian period. Through comparative analysis of collected samples and recovered effigy pipes, I hope to discover if these formations were utilized as prehistoric sandstone sources and what impacts that may have on understandings of Mississippian trade patterns.



[Howard Hughes Medical Institute Science Seminars: Fall 2012](#)

This fall, first year students have the opportunity to enroll in one of the new HHMI-funded, collaboratively-designed Science Seminars. As [Dr. Steve Reznick](#), Associate Dean for First Year Seminars and Academic Experiences observes, the HHMI grant makes possible “a learning-community model that capitalizes on the unique strengths of a research university.” The new courses, Dr Reznick says, offer students a chance to experience “the excitement and utility of applying scientific approaches to solving the greatest problems of our time.” Seats are still available in these innovative science seminars, so don’t miss your chance to register.

[HHMI-Future Teachers](#)

Written by [Dr. Jennifer Coble](#)

The Howard Hughes Medical Institute Future Teachers (HHMI-FT) internship provides eight future high school science and mathematics teachers with first-hand research experiences in UNC laboratories. All of the HHMI-FT interns are students in [the UNC Baccalaureate Education in Science and Teaching \(UNC-BEST\)](#) program, which is a collaboration between the School of Education and the College of Arts and Sciences. The program provides science and mathematics majors with educational training required to get their North Carolina high school teaching license while they earn their degree. During the HHMI-FT internship, the future teachers learn more about the nature of science and inquiry in their field as they conduct research alongside a UNC graduate student or postdoctoral student. The interns then apply what they have learned in the laboratory as well as their educational expertise to create online learning modules. The learning modules are designed to teach high school students about the nature of science and scientific inquiry while also supporting their understanding of objectives in the North Carolina high school curriculum. They provide valuable self-study opportunities and curriculum support to high school science and mathematics teachers. All



Chris Joy presents his learning module on Quadratic Equations in Kinematics

of the modules contain interactive animations and/or games that engage high school students in the process of inquiry while providing insight into the questions researchers ask, the tools they use and the nature of their daily work. The 2012 learning modules explore a variety of topics including the innovative methods scientists use to study cells and proteins, the value of model organisms, how research is uncovering the mechanisms of cancer and why mathematical models are used to represent and illuminate natural phenomena.

Student researchers in the [McNair Scholars](#) program presented their findings in a poster session on Friday, July 27 outside the Upendo Lounge in SASB-North.



McNair Scholar Rita Phetmixay discusses her findings with OUR Staffers Monica Richard and Donna Bickford. Photo by Svetlana Lapushin.

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