



April 12, 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](http://www.unc.edu/depts/our) or email us at [our@unc.edu](mailto:our@unc.edu).

### Announcements and OUR News

#### OUR Blog:

- [2011 SMART Scholar Tiffany King](#)

#### OUR Programs:

- [HHMI – Future Scientists and Clinicians Fellowship Program](#)

#### OUR People

- Meet [Ginnie Hench](#), the HHMI Science Learning Communities Program Coordinator
- Meet [three OUR Ambassadors](#). Are you interested in serving as an OUR Ambassador? If so, contact Donna Bickford at [dbickford@unc.edu](mailto:dbickford@unc.edu)

#### OUR News

- 80 undergraduates have been awarded [Summer Undergraduate Research Fellowships](#) for summer research projects.

#### Events:

- [Conducting Oral Histories: Developing Your Interview Projects](#) workshop
- [SOULCON](#): an undergraduate humanities research conference
- [The Celebration of Undergraduate Research is MONDAY!](#)

### Announcements and OUR News:

#### [2011 SMART Scholar Tiffany King](#)

Tiffany shares her experiences as a DEBS/SMART Scholar and discusses the excellent faculty mentoring she's received.

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HHMI – Future Scientists and Clinicians Fellowship Program. The [Howard Hughes Medical Institute](#) Science Learning Communities Program is an undergraduate science education and outreach program. The HHMI-Future Scientists and Clinicians (HHMI-FSC) fellowship was designed to enhance the “culture of undergraduate research” for high-ability students from low-income backgrounds who were not seeking research experiences that matched their talents. To qualify, applicants must be [Carolina Covenant Scholars](#). The purpose of the HHMI-FSC program is to foster an intellectual community that empowers fellows to engage in biomedical research; think critically about their own research; and effectively communicate their findings. Every fellow is placed in a PI Mentor's lab and paired with a graduate student or postdoc Co-Mentor, who trains the fellow at the bench and guides them to relevant literature. The full immersion experience at 40 hours per week for two consecutive summers allows fellows to integrate into their lab community. Students who have had prior part time lab experience have said that the full time experience allowed them to feel more a part of the lab family, rather than an occasional visitor. In 2011, we had one off-site field trip, along with weekly skill-building workshops and journal clubs. We work with UNC's [Evaluation, Assessment and Policy Connections](#) (EvAP) team to get

feedback from participants and determine whether programming is appropriately suited to meet long-term goals. Overall, survey feedback from fellows, Co-Mentors, and PIs indicated high satisfaction with the program after year one. As one student wrote, “this whole experience was truly enlightening.”

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OUR Staff Profile:



Ginnie Hench

I am OUR's [Howard Hughes Medical Institute](#) Science Learning Communities Program Coordinator and a postdoctoral research scholar in the Biology Department. I feel very lucky to have a unique position that allows me to continue to do research and to be an integral part of the [Office for Undergraduate Research](#) team at the postdoc level. My position involves lots of multi-tasking, which can be a challenge, but overall I love getting to wear many hats. The HHMI First Year Seminar program is exciting because I learn what aspects of science other UNC faculty deem important or exciting for non-science majors to learn about. I enjoy working with the HHMI Future Teachers program because it is fun to see how people come up with new ways of teaching scientific concepts. Finally, I work directly with the Future Scientists and Clinicians fellowship program. As an educator, this program is great because the students participate for two summers and I get to see how they mature and blossom during the fifteen month time period.

My current bench research project uses a cute inky cap mushroom called *Coprinopsis cinerea* and is funded by the [Department of Energy's Joint Genome Institute](#). I am investigating meiotic chromatin dynamics using a technique called FAIRE, which stands for formaldehyde assisted isolation of regulatory elements. As a graduate student at UNC, I studied immunology and the biochemical interaction between two proteins. Prior to graduate school, I earned a BS in Cellular & Molecular Biology and a BA in Studio Art. I like working in different kinds of art media. My interdisciplinary background informs my interest in the relationship between science and society, which, in turn informs my approaches to science teaching, outreach, and communication.

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Meet three [OUR Ambassadors!](#)

Miranda McNear is a junior Exercise and Sports Science major and a Chemistry minor.

During the summer of 2010 I was able to begin work on undergraduate research thanks to the SMART Program. Over the course of the summer I developed cell culturing skills and microscopy techniques. With the help of these new practices I was able to complete many experiments on the interactions of 1 $\mu$ m MyOne beads inside a single HeLa cell, cervical cancer cell. Along with my graduate mentor, Kris Ford, I eventually observed and started to quantify the release of a single strand of DNA called Antisense Oligonucleotide. We determined a process to enhance the release of DNA into a cell through the assistance of magnets. I was also introduced to an inverted microscope that was



capable of epifluorescence imaging. Finally, a three-dimensional force microscope was used to magnetically pull on beads inside a cell. The overall objective of our research is to increase the amount of dosage of a drug into cells.



Sarbajeet Nagdas is a junior with a double major in Chemistry (Biochemistry Track) and Biology.

I do research for Dr. Richard Cheney's lab in the UNC School of Medicine's Department of Cell and Molecular Physiology on Myosin10. My research is approaching Myosin10 related projects from a biochemical perspective. I have also done research in the Chemistry Department, working on surface chemistry and the effects of haptotactic gradients on cell.

Linda Ohadugha is a senior Nutrition major.

I am examining how parental feeding behaviors affect child health outcomes. I have also had experience with analytical chemistry research through the Science and Math Achievement and Resourcefulness Track Program (SMART) program.



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## Events

### Conducting Oral Histories: Developing your Interview Projects

This workshop will focus on helping undergraduate students develop their own oral history interview projects: whether you are preparing for an interview project abroad, interested in a family history project with grandparents, pursuing a research question for a thesis, or using oral history for community-based engagement work. We will offer three different times for small group workshops with Southern Oral History Program staff and spend a majority of the session discussing questions and developing and giving feedback that will help refine projects. This will include support for how to pursue background research, interview questioning, ethical challenges, but mostly focus on specific questions and ways to help guide you through the process of preparing for your own work. Pick one: 1-2:30 pm, Monday, April 16 3:30-5 pm, Tuesday, April 17 2-3:30 pm, Wednesday, April 25 Where: The Love House (corner of Battle and Franklin)! *Space limited to the first 6 people per session! RSVP is required.* Register online at:

<https://docs.google.com/spreadsheet/viewform?formkey=dDJyYjR2TEJ1ZWVhUDIIYjdzY092Q3c6MQ>

SOULCON, an undergraduate humanities research conference featuring student presenters [from English and Comparative Literature](#), takes place on Friday, April 13 from 12:00-3:15 p.m. in Donovan Lounge on the second floor of Greenlaw. The conference begins at noon with "Survival Tips" from DOECL seniors for rising English and Comparative Literature majors--four speakers will offer advice and hard-earned

insights on course planning, funding opportunities, transfer student challenges, writing the honors thesis, applying to graduate school, studying abroad and more. A generous lunch open to all will be served from 12:30-1:00 PM, and then we will have two panels of student researchers presenting their work (please see schedule below for details). Please join us for some or all of the events and festivities and bring your friends--you are welcome even to just come for lunch if you like; there will be plenty of food and drink for all! We look forward to seeing you on Friday! Thanks and all best from the folks at S.O.U.L.

#### SOULCON SCHEDULE

12 noon: *"Three Things I Know Now ...": Tips for Surviving the English Major from Seniors Who've Been There and Done That*

4 DOECL seniors will offer tips for "surviving" (and hopefully thriving) as English and Comparative Literature majors at UNC. Topics to be covered will include course planning recommendations, research and funding tips, advice on writing the honors thesis and studying abroad, advice for transfer students, etc.

12:30 *LUNCH for all*

1:00-2:00 *Student Research Presentations: Blood, Brains and Crusade Narratives*

- Kelsey King: "Ritualistic Narratives of the First Crusade"
- Connie Tran: "The Fancy and Imagination of Cognitive Science"
- Amelia Parsons "Severed Blood: the Gender of Revenge in Shakespearean Drama"

2:10-3:10 *Student Research Presentations: Time, Space and Chaucer*

- Christopher Forbes: "The Plunge: Woolf's Reconciliation of Two Different Treatments of Time"
- Matthew Boulette: "Being 'on the very brink of eternity': Divine Space, Fallen Matter, and the Corporeality of Damnation in Jonathan Edwards's Ontology"
- Samuel Lemley: "That I May Speke as Chaucer Doth": Thomas Speght's 1602 Workes and the Fashioning of Chaucer in the Early Modern World

### The 13<sup>th</sup> Annual Celebration of Undergraduate Research!!!



Please join us on Monday, April 16, 2012, from 1:00-3:45 p.m. in the Great Hall of the Frank Porter Graham Student Union. You can hear platform talks, visit poster sessions and attend the [Carolina Research Scholar Program](#) recognition ceremony. We have almost 200 undergraduate students participating - a 40% increase from last year. Student hosts will help you navigate the Celebration and faculty mentors will be on hand to speak with interested students.

This year we are so excited to introduce a brand new way to experience the Celebration -- Research Bingo -- designed by one of our student staff members, Chelsey Bentley. Play Research Bingo, cast your vote for the best poster and, if you are a UNC student, you are eligible for our Grand Prize drawing!!

Here's a sample of the research you can learn about on Monday:

- Love in the Time of Domestic Battle: An Analysis of Civil War Love Letters;
- Factors driving xanthid crab colonization of oyster reefs
- Indigent Defense Funding and its Effect on Capital Punishment in North Carolina, 1976-present
- How Couples Talk about Weight Loss Attempts: Gender Differences in Speech



Please join us for an educational, enjoyable, enriching experience as you learn more about undergraduate researchers and their research projects!

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The Office for Undergraduate Research

[www.unc.edu/depts/our](http://www.unc.edu/depts/our)

**Where will your curiosity lead you?**