

OUR Fall 2010

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INSIDE THIS ISSUE:

URA Student Interview 2

Save The Dates 2

IRES Student Interview 3

2010-2011 URA Participants 4

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International Undergraduate Summer Research Experiences in the United Kingdom (IRES)



Synthetic Building of the School of Chemistry at the University of Bristol

In April 2010, UNCG (PI Dr. Terry Nile) was awarded three years of NSF funding to create a new International Research Experience for undergraduates. Each year, six students from colleges/

universities in the Greensboro, NC area will be given a chance to carry out research at the University of Bristol in the United Kingdom for the summer. The participants will be recruited after their sophomore and junior years, and at least half (50%) will hail

from underrepresented groups. This experience will provide students the opportunity of undertaking



Willis Memorial (tower) and Bristol Museum (left)

cutting edge research in synthetic chemistry at an extremely well-equipped major research university.



Greek Statue from Parthenon in British Museum

Meghan Fitzgerald Wins Prestigious NSF Graduate Fellowship

For the past two years, Meghan Fitzgerald has been working along side with Dr. Jan Rychtar, Associate Professor of Mathematics and Statistics examining models of kleptoparasitic behavior in insects and spiders. Her research helped her earn a NSF Pre-doctoral Research Fellowship from the NSF.

This is a highly competitive fellowship, less than 1% of those who apply receive the award. She is attending the University of Wisconsin-Madison.

Congratulations Meghan!



URA Interview: Semone Gobern



SAVE THE DATES

STAMPS Deadline:
Friday, October 28, 2010

URA Proposal Deadlines:
Friday, January 28, 2011
Friday, March 18, 2011

O.U.R. Expo:
Thursday, April 7, 2011

For more information
please visit:
www.uncg/our/students

1. How did you find out about the research of the faculty member you worked with? I knew that

I was interested in doing research so I went on the Nutrition Department's website and looked at the different research topics professors in the department were working on.

2. What is the title of your research? Briefly describe. The title of my research is: Does trans-10, cis-12 Conjugated Linoleic Acid Cause Inflammation, Insulin Resistance, and Delipidation by Activating Phospholipase C in Human Adipocytes? CLA is a well-known weight-loss supplement (Tonalin)

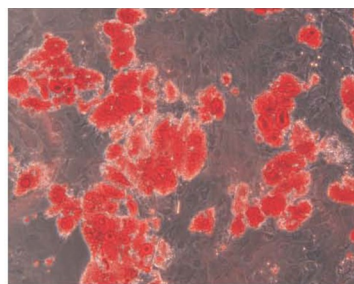
sold worldwide. It has been previously shown that one of the isomers used in the weight loss supplement promotes dilapidation, inflammation and insulin resistance in adipocytes. My research studies the mechanism of this CLA isomer and prevent its induction of delipidation, inflammation and insulin resistance.

3. How long did your research project last? I started working in Dr. McIntosh's lab in January of this year and will continue to do research until I graduate in May 2012.

4. How was your involvement in the research project helped you with respect to your college experience? While doing research, I have learned to think more

critically and have been able to learn about the research process and techniques important in the biotechnology industry. I have also learned a lot of patience and determination doing research because sometimes you don't get the results that you were expecting and you have to take what you learned and try it again.

5. What was the most positive aspect of your research project? The most negative? The most positive aspect of doing the research is getting to work with all



the great people in the lab and having hard work pay off with positive data. Also, having a great mentor

like Dr. McIntosh has helped me to learn so much about nutrition science and the research process.

The State of North Carolina Undergraduate Research and Creativity Symposium (SNCURCS)

Saturday, November 20, 2010

Hosted by: Meredith College (Raleigh, NC)

Registration Ends: Friday, October 15, 2010

For more information, please visit: <http://www.sncurcs.org/>

IRES Interview: Jessica Bame

1. How did you become interested in the research project? I had heard of the research and trip to Bristol UK involved with it when I was a freshman in fall 2007. I became interested in working with Dr. Craig Butts at the University of Bristol, with his research into 3D structural elucidation from NMR, when a fellow lab mate, Jennifer Flynn in the Cech lab worked under Dr. Butts in the summer of 2009. I had to apply to the program (and happily was accepted). When Dr. Nile, who is the coordinator of the Bristol trip each summer, asked if I wanted to work with Craig, I jumped at the chance.

2. What was your project about? My project was how different solvents effect peak overlap and resolution in spectra of strychnine, and how this affected getting internuclear distances from the NOE. The NOE can detect hydrogen atoms that are close in space without being close in bond, so showing one the areas where a molecule in folding on itself or stretched out. I did multiple 2D experiments as in H2BC and HMBC which correlate which carbon atoms are bonded to which hydrogen atoms. All these different NMR experiments can help create a 3D

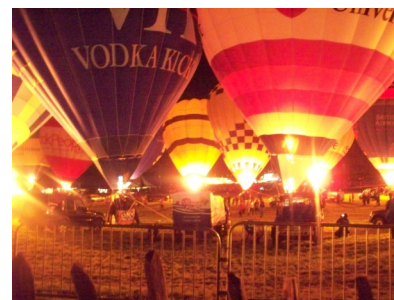
structure of a molecule, giving researchers another method of finding 3D structures when crystallography is not an option.

3. How has your involvement in the project helped you? The experience in England taught me how to use NMR from scratch. I had no previous experience with NMR at all, but the NMR group was kind and taught me what I needed to know to feel confident using NMR in any of my other research I ever do. This includes the research I want to incorporate NMR into eventually that I perform currently under Dr. Cech. This project showed me a different aspect and different field of chemistry, where one can discover the identity of any compound with just the right combination of experiments.



like to work with mechanical things. I suggest synthetic if you are more about the wet chemistry and breaking out a beaker and large amounts of chemicals. I would also strongly suggest, go out as much as possible and experience the country. I went somewhere new or to unique festivals every weekend I was there. If you are really serious about experiencing the

country, try doing a little research online ahead of time and it makes peaking unique locations a lot easier. Even go to another country, you are so close to Paris or Dublin, so why not?



4. If you could give any advice to future participants, what would you tell them? Whatever lab experience you choose, do what you want, not just because others are doing the same. I stayed in a flat with 6 other people who did synthetic chemistry on the trip; I was the only one who did NMR. I suggest NMR to those who like instruments and

5. What were the major differences between the work in the US & the UK? The main difference was how the people in the labs were so much more laid back than in the US, if anything ever went wrong, they didn't get all worked up about it and just moved forward. I wish labs in the US were a little more like that, cause science is about moving forward despite the obstacles.

2010-2011 URA Participants

Symone Alexander, Student
Terrence Nile, Faculty Mentor
Department of Chemistry & Biochemistry

Nickolas Anderson, Student
Bruce Banks, Faculty Mentor
Department of Chemistry & Biochemistry

Richard Bell, Student
Sandra Shultz, Faculty Mentor
Department of Kinesiology

Courtney Catanese, Student
Bonnie Canziani, Faculty Mentor
Jerrie Hsieh, Faculty Mentor
Department of Hospitality &
Tourism Management

Chad Collins, Student
Mona Shattell, Faculty Mentor
Department of Nursing

Arnold Dzorgbadzor, Student
Jason Reddick, Faculty Mentor
Department of Chemistry & Biochemistry

Sabrina Epps, Student
Janet Boseovski, Faculty Mentor
Department of Psychology

Madeline Farlow, Student
Patrick Lucas, Faculty Mentor
Department of Interior Architecture

Megan Feeney Wolfe, Student
Terri Ramsey, Faculty Mentor
Department of Communication
Sciences & Disorders

Miranda Freeman, Student
Aaron Allen, Faculty Mentor
Department of Music

Kelsey French, Student
Richard Faldowski, Faculty Mentor
Department of Human Development
& Family Studies

Troy Fullwood, Student
Riikka Sarala, Faculty Mentor
Department of Business Administration

Ivan Gilbert, Student
Sarah Wagner, Faculty Mentor
Department of Anthropology

Brian Gillies, Student
Selima Sultana, Faculty Mentor
Department of Geography

Semone Govern, Student
Michael McIntosh, Faculty Mentor
Department of Nutrition

Mary Greer, Student
William Markham, Faculty Mentor
Department of Sociology

Jenna Haddock, Student
Peter Delaney, Faculty Mentor
Department of Psychology

Molly Hagen, Student
Selima Sultana, Faculty Mentor
Department of Geography

Christie Haugh, Student
Tracy Nichols, Faculty Mentor
Department of Public Health Education

Hannah Hendricks, Student
Lili Sahakyan, Faculty Mentor
Department of Psychology

Lauren Hill, Student
Joanne Murphy, Faculty Mentor
Department of Classical Studies

Gina Hurley, Student
Denise Baker, Faculty Mentor
Department of English

Anne Keyworth, Student
Mark Schulz, Faculty Mentor
Department of Public Health Education

Ia Lee, Student
Alice Haddy, Faculty Mentor
Department of Chemistry & Biochemistry

Lorraine Malek, Student
Bruce Banks, Faculty Mentor
Department of Chemistry & Biochemistry

Erin Mezgar, Student
Darlene Rodriguez, Faculty Mentor
Department of Political Science

Juan Miranda, Student
Stephen Sills, Faculty Mentor
Department of Sociology

Pallie Nardali, Student
Terrence Nile, Faculty Mentor
Department of Chemistry & Biochemistry

Allison O'Leary, Student
Janet Boseovski, Faculty Mentor
Department of Psychology

Leah Petriccione, Student
Tina Sarawgi, Faculty Mentor
Department of Interior Architecture

Rachel Reed, Student
Alice Haddy, Faculty Mentor
Department of Chemistry & Biochemistry

Maiken Schoenleber, Student
Patrick Lucas, Faculty Mentor
Department of Interior Architecture

Lezley Scholl, Student
Jacquelyn White, Faculty Mentor
Department of Psychology

Robert Stoesen, Student
Maya Chhetri, Faculty Mentor
Department Mathematics & Statistics

Crystal Taylor, Student
Kari Eddington, Faculty Mentor
Department of Psychology

Tshering Tobgay, Student
Keith Debbage, Faculty Mentor
Department of Geography

Megan Walley, Student
Ruth DeHoog, Faculty Mentor
Department of Political Science

Nick Williford, Student
Asa Eger, Faculty Mentor
Department of History

Philip Wingfield, Student
Patricia Gray, Faculty Mentor
Department of Music

Rhonda Yocum, Student
Richard Faldowski, Faculty Mentor
Department of Human Development
& Family Studies

