



Newsletter of the
Northeast
Georgia
Section of the
American
Chemical Society



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Monthly Meeting Notice

Dr. Paula J. F. Cray
U.S. Department of Agriculture/ARS, Athens, GA

Talk Title:

**Exploring the Interactions between Bacterial Populations and
Antimicrobials**

**Thursday, March 29, 2012
6:00 PM**

**Loco's Grill & Pub
1985 Barnett Shoals
Athens, GA 30605**

Each NEGS ACS member and chemistry major college student will
receive a \$5.00 credit for his/her meal.

Chairmen's Corner

NEGS ACS Annual Awards Night
Date: April 26, 2012 Time: 6:00 PM
Place: George's Lowcountry Table
2095 S. Milledge Ave., Athens, GA 30605

Speaker's Biographical Sketch

Dr. Paula J. Fedorka-Cray is currently the Research Leader of the USDA-ARS Bacterial Epidemiology and Antimicrobial Resistance Research Unit in Athens, GA where her research focuses on the ecology and pathogenesis of antimicrobial resistance. She is also the Director of the animal arm of the National Antimicrobial Resistance Monitoring System (NARMS) and Co-Director of the USDA VetNet Program. She holds a BS degree from The Pennsylvania State University, a master degree in bacteriology from North Dakota State University, a MAS degree in administration from Johns Hopkins University, and a PhD from the Medical School (MSIA - Veterinary Microbiology) of the University of Nebraska. She has received numerous awards, over 170 invitations to present her work, and has published extensively with more than 160 referred scientific journal publications.

Talk Synopsis

Exploring the Interactions between Bacterial Populations and Antimicrobials

Bacteria are ubiquitous, covering every ecological niche known to man. Within these ecological niches bacterial populations adapt to ensure their survival. The development of antimicrobial resistance is an example of a bacterium's ability to adapt and survive. Antimicrobial resistance developed shortly after their introduction and wide spread use during World War II. Today antimicrobial resistance is a global problem, which is exacerbated by the limited development of new classes of antimicrobials. While overuse and misuse of antimicrobials in human medicine plays a major role in the resistance currently reported, the use of antimicrobials in animal production is also of concern. The study of specific ecological niches, including farm environments and waterways, and animals themselves provides us with the opportunity to assess the role each plays in the development and dissemination of resistant bacteria. This presentation will provide an overview of antimicrobial resistance among food borne and commensalism bacteria in these ecological niches and explore the challenges associated with the control and mitigation

Northeast Georgia Regional Science Fair NEGS ACS Awards

The Northeast Georgia Section ACS sponsored awards at the Northeast Georgia Regional Science Fair held at Athens technical College, Friday, Feb. 24. Awards went to the following students:

Chemistry:

Hailey Clark—"Ionic properties effect on H₂O boiling and freezing point", North Oconee High School.

Biochemistry:

Connor Roberts & Ritchie Jarvis—"The Effect of Breast Cancer on Intracellular localization of Vitamin B1 Transporters", Stephens County High School.

Erin Hollander—"Zeaxanthin Production by the Hydroxylase Enzyme of *C. reinhardtii*", Cedar Shoals High School.

Charley Denmark & Katheryne Bennett—"The Effects of Schreckstoff on Non Specific Minnows", Winder Barrow High School

Kailin Huelsman & Stephanie Pimental—"The effects of estrogen on the population gender ratio and sex traits of fruit flies", Stephens County High School

Emma Frazier—"The effectiveness of several types of acidic preservatives in tomato added to 3 different types of commonly found bacteria", Stephens County High School

Judges Still Needed!!!

GEORGIA STATE SCIENCE & ENGINEERING FAIR JUDGES NEEDED

If you find you are free Friday, March 30, we are still in need of judges for the Georgia Science and Engineering Fair to be held at the Athens Classic Center. Please go to the following website and fill out the application form to be a part of this most worthy endeavor especially in the field of chemistry or biochemistry.

<http://www.georgiacenter.uga.edu/sites/default/files/gsef-2012-judge-volunteer-form.pdf>

Be a Chemistry Ambassador: Help Bring Chemistry to Classrooms!

ACS has developed many ways and educational tools to help kids from kindergarten to high school do more hands-on science this school year, and as a Chemistry Ambassador, the link begins with you!

At the Chemistry Ambassadors website, www.acs.org/chemistryambassadors, you can find links to get you started:

- Need a way to introduce yourself to a teacher? Try our emails that make a great first impression.
- You can print off and hand your local teacher flyers detailing ACS resources to bring science into classrooms
- You can provide *ChemMatters* to high school chemistry teachers and students. The magazine complements textbooks, and you can view free articles and other resources online at www.acs.org/chemmatters.
- You can volunteer in a classroom either as part of a full outreach program or on a one-time basis. You might lead an experiment with elementary kids using ACS science kits or give a chemistry presentation to high schoolers drawing from your own research.
- You can alert teachers to a wide range of educational resources and programs, including science kits, scholarships, partnership programs with ACS, and curriculum materials.

Help kindle a child's wonder for chemistry and science exploration this school year! Your gifts and time will definitely be appreciated by teachers, students, and parents alike.

NORTHEAST GEORGIA LOCAL SECTION OFFICERS

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samantha.hawkins@ars.usda.gov
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American Chemical Society National Offices

www.acs.org

Headquarters
1155 Sixteenth Street, NW
Washington, DC 20036

Chemical Abstracts Service
P.O. Box 3012
Columbus, Ohio 43210

General Inquiries (ACS): 800-227-5558

Member Services (ACS): 800-333-9511

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help@acs.org

service@acs.org

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