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Mole Street Journal, February 2008

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Citation

University of Arkansas, Fayetteville. Dept. of Chemistry and Biochemistry. (2008). Mole Street Journal, February 2008. *Mole Street Journal*, 7 (2) Retrieved from <https://scholarworks.uark.edu/mole-street-journal/10>

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The Mole Street Journal

Volume 7, Issue 2

Department Gears Up for RecycleMania 2008 by Heather Jorgensen

RecycleMania 2008 is a reduce, reuse, and recycle contest sponsored by the Environmental Protection Agency WasteWise Program and universities and colleges across the nation.

This is the first year that the University of Arkansas is participating in this contest. The EPA WasteWise program, which the department has been a member of since 2005, promotes source reduction, or, reducing waste by not creating waste through efficient use of resources.

Other ways to reduce your carbon footprint, a term meaning impact on the environment, include reusing and recycling.

The following helpful information is provided by www.epa.gov:

Produce Less Waste by Practicing the 3 Rs:

- **Reduce** the amount and toxicity of trash you discard.
- **Reuse** containers and products; repair what is broken or give it to someone who can repair it.
- **Recycle** as much as possible, which includes buying products with recycled content.

Reducing waste or source reduction actually prevents the generation of waste in the first place, so it is the most preferred method of waste management and goes a long way toward protecting the environment.

Benefits of recycling:

- Conserves resources for our children's future
- Prevents emissions of many greenhouse gases and water pollutants
- Saves energy
- Supplies valuable raw materials to industry
- Creates jobs
- Stimulates the development of greener technologies
- Reduces the need for new landfills and incinerators.

Recycling turns materials that would otherwise become waste into valuable resources. In addition, it generates a host of environmental, financial and social benefits.

Materials like glass, metal, plastics and paper are collected, separated and sent to facilities that can process them into new materials or products.

You may have already noticed signs in the building encouraging recycling and an increase in the number of recycling bins. This is just the first in many efforts the department will be making to increase our efforts to be environmental stewards.

This year's contest is from Jan. 27 to April 5, but the department will continue its stewardship after the contest has ended.

To encourage participation, departmental contests will be held throughout the length of the RecycleMania 2008 contest.

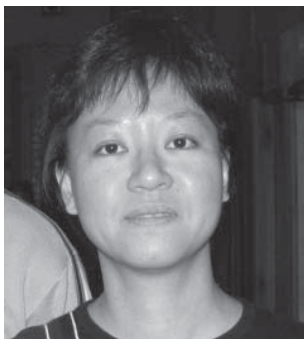
The first prize will be a \$25 restaurant gift certificate to the student, staff, or faculty member who turns in the most practical reduce, reuse, or recycling ideas by 4:30 p.m. Monday, Feb. 18.

Contact **Heather Jorgensen** to submit entries or for more information.

Doctoral Defense

Hong Gu defended her doctoral dissertation "Application of Tryptophan Derivatives for Studies of Membrane-Spanning Peptides," January 30, under doctoral advisor **Roger Koeppe**.

Gu will be a postdoc at Case Western University.



Hong Gu

Faculty News

On the Go

Bob Gawley will give a public lecture "Why Did Alice Say to Kitty 'Perhaps Looking-Glass Milk Isn't Good to Drink?'. A Brief Explanation of Handedness, From Weak Bosons to the Double Helix," sponsored by the Arkansas Center for Space and Planetary Sciences, Feb. 20 at 7 p.m. in the Space Center Theater (Old Museum Building, room 201). A reception will follow.

52nd Annual Biophysical Society Meeting

Feb. 2-6, Long Beach, Calif.

Many from the biochemistry division attended the annual meeting of the Biophysical Society — the largest gathering of biophysicists around the world.

Frank Millett gave an invited talk "Design of New Ruthenium Complexes for Time-resolved Studies of Proton Pumping Electron Transfer Complexes."

Faculty **Lois Geren**, **Denise**

Greathouse, **Suresh Kumar**, graduate student **Nick Gleason**, and undergraduate **Trish Tran** attended.

The following poster presentations were made.

Paul Adams "Protein Structure and Dynamics in the Switch I Region of Cdc42Hs"

Dan Davis "Cation- π Interactions in Cytochrome f: Relation to Electron Transfer between Cytochrome f and Plastocyanin"

Roger Koeppe and **Anna Daily** "Evaluating Side Chain Hydrophobicity Using Bilayer-Spanning Channels: Serine Gramicidin Channels"

Postdocs

Rajalingam Dakshinamurthy "Biophysical Characterization of Human Interleukin 1α "

Anna Daily "Role of Annexin in the Non-Classical Secretion Signal Peptide-less Proteins"

Huimin Liu "Expression of, and Preliminary Biophysical Characterization of a Minimal Binding Domain Peptide of TSC2 that Binds to the Small GTPase Rheb"

Kathir Karuppanan "Understanding the Role of Divalent Cations in FGF Signaling"

Leena Philominathan "Collagen Binding Mechanism of a Novel Osteoporosis Drug"

Graduate Students

Koteshwara Ananthamurthy "3D solution structure of the C-terminal Chromodomain of the Chloroplast Signal Recognition Particle"

Anne Froyd-Rankenber and undergraduate **Natalie Anderson** "Investigation of "Half-WALP" Peptides in Presence of Model Membrane Lipids Using NMR Spectroscopy"

Jeff Havens "Photoinitiated Electron Transfer between Sulfite Oxidase and Cytochrome c"

Chris Mazzanti and undergraduate **Eric Flagg** "Structural Studies of the Transmembrane and Cytoplasmic Domains of Anthrax Toxin Receptor"

Nicole Richardson "Mutagenesis of Cytochrome f Y160 and R156: Effects on Redox Properties"

Lindsay Rutherford "Understanding the Molecular Mechanism Underlying the Auto Inhibition of the Fibroblast Growth Factor Signaling"

Ryan Thurman "Dimerization of the FGFR is Prerequisite for FGF Signaling?"

Vitaly Vostrikov "Properties of WALP23 in Mixtures of Oriented Lipids Investigated by Solid-State 2H and 31P NMR Spectroscopy"

Nicole Webb "Specificity of the Helical Conformation Induced by 2, 2, 2-Trifluoroethanol"

Quan Yuan "Effect of Qo site Inhibitor JG144 on Electron Transfer Reactions of Cytochrome bc₁"

Undergraduates

Rachel Ellis "Characterization of Transmembrane Anchored Lactoferricins"

Khalil Ibrahim "Understanding the Anti-angiogenic Mechanism of Suramin"

Nicole McClellan "Molecular Interactions of Lactoferricin Peptides"

February Safety Tip

Homeland Security now requires the University to report the presence of certain quantities of certain chemicals.

Please report such to EH&S.

The list is posted in the safety section on the department WebCT site. Normally, those in category E and F on sheet 2 will be of concern.

ACS DGR Free Online

The 2007 edition of the *ACS Directory of Graduate Research* (DGR) and its searchable online version, DGRweb, have been published. DGRweb continues to be available free of charge at www.acs.org/dgrweb.

The features of the 2007 edition of DGRweb include:

- Information on 10,118 faculty members and 668 departments in 8 chemistry subdisciplines
- Listing of 68,243 publication citations
- Search for both faculty and institutions
- Improved faculty search using multiple keywords for specific research interests
- New regional search feature for faculty and institutions
- New "Print PDF" feature, which allows users to print individual department listings formatted as in the hardcover DGR
- New section on planning for graduate work
- Access to the complete 1999, 2001, 2003, and 2005 databases

Student News

New Graduate Students

This spring two new graduate students joined the department.

Randy Francisco Espinal Cabrera is from Santo Domingo, Dominican Republic. He holds a chemistry degree from University Autonoma of Santo Domingo.

Chris Rupar is from Joplin, Mo. He has a degree from Missouri Southern State College.



Randy Espinal



Chris Rupar

Doctoral Candidates

Graduate students **Coy Batoy** and **Jeremy Durchman** have passed the appropriate number of cumes and are now official doctoral candidates.

Vostrikov Presents Poster

A poster by **Vitaly Vostrikov**, "Properties of WALP23 in Mixtures of Oriented Lipids Investigated by Solid-State 2H and 31P NMR Spectroscopy," was accepted for the U.S.-Canada Winter School on Biomolecular Solid State NMR, which took place in Stowe, Vt., Jan. 20-25.

The Winter School is a pedagogical meeting aimed at students and postdoctorals in the field of biomolecular solid state NMR, as well as more senior scientists who are interested in entering this field.

Vostrikov is graduate student in the Koeppel lab.

Huff Leads Sorority

Estelle Huff serves as president of Phi Sigma Rho, a social sorority for women in the fields of engineering, science, mathematics, and technology.

For more information about Phi Sigma Rho see <http://comp.uark.edu/~phirho>.

Huff is a graduate student in the Pulay lab.

SURF Awards

The University once again leads all state institutions in the number and value of State Undergraduate Research Fellowships awarded to its students. A total of 55 students, representing five of the university's colleges, received SURF awards for the 2007-2008 academic year.

Britton Blough "Towards Understanding the Non-Classical Secretion of the Human Fibroblast Growth Factor," mentor **T.K.S. Kumar**

Whitney Gammill "A comparative Study of the Use of High-linoleic Acid Vegetable Oils in Producing Conjugated Linoleic Acid (CLA)," mentor **Andrew Proctor** (food science)

Nicole McClellan "Assessment of Antimicrobial and Anti-angiogenic Activity and Membrane Interactions of Lactoferricin Peptides," mentor **Denise Greathouse**

Olena Pickett "A Study of the Synthesis and Chemistry of Metallaanthracenes," mentor **Neil Allison**

Rachel Thomas "Influence of Proline upon the Folding of a Designed Transmembrane Alpha-Helical Peptide," mentor **Roger Koeppel**

Blake Williams "Examinations into the Utility of the Acyclic Allylic Diazene Rearrangement," mentor **Matt McIntosh**

Fall 2007 Dean's List

This fall, 61 undergraduate chemistry majors made the Fulbright College Dean's list.

To be eligible for the Dean's List, students must achieve a term grade point average in the top 10% of their class in their college and have attempted a minimum of 12 credit hours in that term.

Students with FERPA restrictions are not listed.

Brandon Achor	Zachary Manning
Heather Ainsley	Nicole McClellan
Heather Ali	Takanori Miyairi
Kristi Anderson	Rhys Moore
Natalie Anderson	Jared Morphew
Andrew Avery	Kristin Nagle
Kyle Blair	Kellie Ong
Geri Burkett	Sean Pendleton
Sara Camp	Olena Pickett
Kaitlin Castleberry	Iryna Polyakova
Courtney Chandler	Jessica Preston
Joseph Courtney	Jamie Reed
Brooke Dunn	Tyler Rogers
Christopher DuVall	Omar Salem
Eric Flagg	John Sherrill
Abbie Forsberg	Robert Smith
Will Fraser	Elizabeth Srader
Tristan Geis	Molly Steen
Christopher Hall	Ryan Stewart
Ali Haydar	Jessica Sutton
James Hoffman	Tara Teff
Rebekah Hotz	Rachel Thomas
William Inboden	Nicholas Tingquist
Sigrid Johannesen	Kristin Watson
Shigehiro Komatsu	Blake Williams
Rodney LaGrone	Caitlin Williams
Jacob Lavender	Sidney Winford
Zachary Lewis	Jacob Wooldridge
Fredisha Manning	

Calendar of Events

February

- 04..... No seminar
 08..... CUME
 11..... Department seminar - Alan Marshall, Florida State University
 12..... Department seminar
 18..... Department seminar - Cathy Murphy, University of South Carolina
 25..... Department seminar - Kenneth S. Suslick, University of Illinois
 29..... CUME

March

- 03..... Department seminar
 10..... Department seminar - Lawrence A. Quilliam, Indiana University
 17-21 Spring Break, NO CLASSES
 21..... U of A CLOSED
 24..... Department seminar -Henry Schaefer, University of Georgia
 25..... Hartman Hotz Lecture
 28..... CUME
 28..... Last day to drop a full semester course with a "W"
 31..... Priority registration begins for summer and fall
 31..... Department seminar - Om Prakash, Kansas State University

April

- 06-10 ACS Meeting, New Orleans
 07..... No seminar
 14..... Department seminar
 18..... CUME
 21..... Department seminar - Steven Suib, University of Connecticut
 28..... Department seminar - Jon Sessler, University of Texas

May

- 01..... Last day of classes for spring 2008
 01..... Last day to officially withdraw from all courses
 02..... Dead day, NO CLASSES
 03-09 Final exams
 10..... Commencement

Parking Reminder

Please be advised that you must have a guest permit issued by the department to park in the two guest parking spots behind the Chemistry Building.

To sign-up for the parking spaces above see <http://nmrserver.uark.edu/cgi-bin/Calcium39.pl>. This link is also available on the department Web CT site.

Printed parking passes should be placed on the dashboard. Passes are obtained in the main office.

UA Parking and Transit will issue a parking citation for anyone parked on campus without a valid permit. This includes handicapped designated spaces. Some parking spaces are reserved 24-hours a day.

For complete information about parking see <http://parking.uark.edu/>

February Birthdays

- 02..... T.K.S. Kumar
 03..... Melissa Weston
 06..... Ranjani Viswanatha
 07..... Dmitry Mikhaylov
 08..... Xiaogang Peng
 15..... Stephen Gann
 19..... Mya Norman
 27..... Christian Loeschel

The publishing of birthdays is not intended to invade the privacy of anyone. If you prefer not to be included, please let us know.

Library Hours

Chemistry and Biochemistry

Spring Regular Hours

- Monday - Thursday....8 a.m. to 9 p.m.
 Friday8 a.m. to 6 p.m.
 Sunday.....2 p.m. to 6 p.m.

<http://libinfo.uark.edu/chemistry/>

CUME Dates

Cumulative exams for graduate students will take place on the following dates from 5 p.m. to 6 p.m. in CHEM 144:

Feb. 8	Feb. 29
Mar. 28	April 18

The Department of Chemistry and Biochemistry at the University of Arkansas strives for excellence in research, teaching and service in chemistry—the central science.

We aspire to positions of leadership regarding the discovery of new scientific knowledge, the training of students, and the economic development of the State of Arkansas.

We seek to recruit and retain a diverse group of the best faculty, students and staff to address the challenges of the future through interdisciplinary and multidisciplinary research and education.