Doctoral Students Defend Dissertations


Eddings is from Springfield, Mo. and holds a degree from SW Missouri State University. He joined the department in fall 2003.

Fei Guo defended his dissertation “X-Ray Crystallographic Studies of Synaptotagmin-C2A, hFGFR2-D2 and the Complex of hFGFR2-D2:FGF1:SOS,” Dec. 2. His doctoral advisor was Joshua Sakon.

Guo is from Tianjin, China and holds a degree from Yokohama National University. He joined the department in fall 2003 and is now a post doc at Purdue University.

Wei Qi defended his dissertation “Synthetic Studies toward Antascomicin-B,” Dec. 5. His doctoral advisor was Matt McIntosh.

Qi joined the department in spring 2003. He holds a bachelor’s degree in chemistry from Jilin Institute of Technology and a master’s degree in organic chemistry from Northeast Normal University. He was an assistant professor at Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, a research assistant at Northeast Normal University, China and worked as a chemical engineer.
Faculty News

On the Go

Paul Adams presented “Biophysical Characterization of Ras Proteins with Unique Signal Transduction Activities,” to Sigma Xi on campus Dec. 12.

Joshua Sakon will give talks Jan 4-11 at Okayama University in Japan.

The following presentations will be made at the Statewide Conference on Nanotechnology for Healthcare, Jan. 8 to 10 at the University of Arkansas Winthrop Rockefeller Institute on Petit Jean Mountain. The conference will involve researchers in science and engineering at the nanoscale level with emphasis on the medical sciences.

“Light Scattering Study of the Interaction of Fibroblast Growth Factor (FGF) and its Receptor,” Pallavi Sharma,* Dakshinamurthy Rajalingam†, T. K. S. Kumar,‡ and Surendra Singh*; *Physics Department, and †Department of Chemistry and Biochemistry.

“Arsamine Interactions with Lipid Bilayers,” Roger E. Keppe II*, Denise V. Greathouse and Vitaly V. Vostrikov.

“Use of Nanomaterials in the Study of Protein Interactions in Targeting to Membrane-localized Transporters,” Robyn Goforth1, Nathaniel Lewis1, Naomi Marty1, Alicia Kight1, Dakshinamurthy Rajalingam2, Thallapuranam Krishnaswamy Suresh Kumar2, Ralph Henry1, 1Department of Biological Sciences and 2Department of Chemistry and Biochemistry.

Graduate Student Evaluations Memo by Dan Davis

A note to all faculty and graduate students being advised by department faculty from Dan Davis, graduate advisor.

As announced at the beginning of the fall 2008 semester, we will be enforcing the rules regarding graduate student evaluations more rigorously beginning with the spring 2009 semester.

This is especially true of the timing of proposal preparation and submission and scheduling of the annual committee meeting. The rules regarding these issues are found on pages 15-17 of "Graduate Student Guide." This document can be found on the department’s Blackboard site. The essence of the rules is summarized below:

Beginning with their second year committee meeting, ALL graduate students whose advisor is a member of the Chemistry and Biochemistry faculty must prepare a written proposal which must be submitted to their committee no later than March 1. The proposal must be defended orally before the student’s committee no later than April 15. (Note that this also applies to students who may be pursuing Ph.D. degrees in fields other than chemistry – the operative definition is whether one’s advisor is a member of the chemistry and biochemistry faculty.)

Some general points to remember:

1. The contents of a proposal for annual committee meetings can be found on page 16 of the “Graduate Student Guide.” A proposal is more than a progress report on what you have done in the past year. It should also include a detailed plan for what you intend to accomplish during the coming year and how you intend to do it. A statement saying that you plan to “synthesize and characterize molecule X” or “characterize the properties of protein Y” is not an experimental plan unless you describe how you intend to do so. Students nearing the end of their degree programs should also present a timeline for completion of their research, dissertation preparation, and defense thereof.

2. The proposal must be submitted to the committee by March 1 – not just to your advisor by March 1. Your advisor should have time to review and approve the proposal and its contents BEFORE it goes to your committee. This means that you should start thinking about this process well in advance – today is not too soon. Discuss with your advisor how far in advance they wish to see the proposal in order to have time to review it before it goes to your committee.

3. Proposal defenses are graded – pass, intermediate, or fail. A score of intermediate on either the written proposal or the oral defense thereof requires that portion be repeated and re-evaluated within six weeks. A score of fail in either area results in loss of financial support for the coming year.

4. Exceptions to these policies cannot be made by the student’s committee or their advisor. Exceptions can only be made by the department’s graduate advisor. Prior approval is necessary for extensions to the dates listed above. If such an extension is granted, it will not be open-ended but a new deadline will be assigned by the graduate advisor.

5. Students failing to meet these requirements will have a hold placed on their summer registration. Note that no registration also means no pay!

75th Issue of the Mole

The 75th issue of Mole Street Journal was published in December 2008.

The first issue appeared in print in September 2002 and has been published at the beginning of each month ever since, with the exception of April 2007.

The Mole was created and named by chairman Bill Durham as an internal publication to communicate news within the department. Today its reach extends beyond the department and is sent to donors, friends and alumni as well as others on campus. It is posted on the department Web site and continues to be available in print.
The following is a list of poster and oral presentations made by department researchers and student at the Arkansas INBRE Research Conference in Fayetteville, Nov. 7-8.

**Save the Date** – the 2009 Arkansas INBRE Research Conference will be in Fayetteville Oct. 23-24.

**Poster Presentations**
- “Effect of Osmolytes on Protein Stability and Folding,” **Andrew Avery**, D. **Rajalingam** and **T.K.S. Kumar**.
- “Biophysical analyses of S2 and S3 domains of the bacterial collagenase to study their activation mechanism,” **Ryan Bauer**, **Sagaya Theresa Leena Philominathan**, and **Joshua Sakon**.
- “Investigation of the Antimicrobial and Lipid Perturbing Capabilities of Acylated Lactoferrin Peptides,” **Laura Bradney**, **Denise Greathouse**.
- “Biophysical Characterization of FGF Signaling Complex,” **R. Dakshinamurthy** and T.K.S. **Kumar**.
- “NMR Studies of the Structure and Dynamics of Gramicidin A in SDS Micelles,” Jennifer **Diaz Lemmons**.
- “Structural and Functional Role of Proline Residues in Fibroblast Growth Factor-1,” Isabelle **Huber**, D. **Rajalingam** and T.K.S. **Kumar**.
- “Understanding the Mechanism of the Anti-angiogenic Activity of Suramin,” Karuppanan **M. Kathir**, Khalil **Ibrahim** and T. K. S. **Kumar**.
- “3D Solution Structure of the C-terminal Chromodomain of the Chloroplast Signal Recognition Particle and Its Interaction with cpSRP 54 Peptide,” Ananthamurthy **Koteshwara**, Karuppanan **M. Kathir**, Robyn **Goforth**, Ralph Henry and Thallapuranam K. Suresh **Kumar**.
- “Experimental Solvation of KCl and NaCl in N-methylacetamide,” Christopher L. **Mazzanti** and Roger E. **Koepppe** II.
- “Phosphorylated Proteins in Normal and Platelet GP Ib-IX-V Deficient Mice,” Maria **Super**1,2, Judith Dent2, Susan Russell2, and Jerry Ware Ph.D.2. 1University of Arkansas, Fayetteville, 2Department of Physiology and Biophysics, University of Arkansas for Medical Sciences.
- “A Study of an Alternate α-Elimination Reaction to Form Carbene Compounds,” Maria **Super**, Christian **Loeschel**, Neil Allison Ph.D.
- “Influence of Proline upon the Folding and Geometry of the WALP19 Transmembrane Peptide,” Rachel E. **Thomas**, Vitaly V. **Vostrikov** and Roger E. **Koepppe** II.

**Student Oral Presentations**
- “An Innovative Method for the Purification of Recombinant Proteins,” Lauren **Edwards***, Dr. Paul **Adams**.
- “HPLC Analysis of Paralytic Shellfish Toxins,” Sean **Stevens***, Prof. Bob **Gawley**.
- “Studies toward the Oxidation and Alkylation of Sulfides using Sulfonyl Chlorides and Alkyl Sulfonates,” Ashley **Fredrick***,1 Chris **Saunders**2, Wesley E. **Stites**2, Matthias C. **McIntosh**2, Arkansas Tech University1, University of Arkansas2.

Fredrick - UA INBRE 08 student
* Denotes main presenter
Titles printed as submitted

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**Arkansas INBRE Research Conference**

Top left: Karuppanan Kathir, Chris Mazzanti and Jennifer Lemmons. Top middle: Leena Philominathan and Anna Daily. Top right: undergraduate Laura Bradney

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**January Safety Tip**

Clean up your mess!
Calendar of Events

January
11.................. Last day to receive 100% cancellation of fees for spring 2009
12.................. Spring classes begin
16.................. Last day to add a full semester course
19.................. University CLOSED, Martin Luther King Day
26.................. Spring seminar series begins
26.................. Last day to drop a full semester course without a “W”
30.................. CUME

Spring at a Glance

February
13.................. CUME
20.................. Graduation application deadline for spring 2009 graduation
25.................. Early progress reports e-mailed for 1000 and 2000 level classes
28-March 4........... Biophysical Society Meeting, Boston

March
06.................. CUME
16-20 .............. Spring Break, no classes
20.................. University CLOSED
22-26 .............. ACS Meeting, Salt Lake City
27.................. Last day to drop a full semester course with a “W”

April
03.................. CUME
13.................. Fry Lecture
17.................. CUME
30.................. Last day of spring classes
30.................. Last day to officially withdraw from all courses

May
1.................. Dead Day, no classes
2-8 ............... Finals
9.................. Commencement

Spring 2009 Seminar Series

The Spring 2009 Seminar Series begins Monday, Jan. 26. Spring seminars will be in CHEM 144 from 3:30 p.m. to 4:20 p.m. The time for the reception will be announced. For the schedule see http://chemistry.uark.edu/2163.htm

Nobelaureate to Give Fry Lecture

Organic chemist Professor Robert H. Grubbs, California Institute of Technology, will give the Fry Lecture April 13, 2009. Grubbs won the 2005 Nobel Prize in chemistry for his work on catalysis, which has led to a wide variety of applications in medicine and industry.

January Birthdays

01........Sefat Alwarsh
01........Benard Omogo
06........S. Mariccor Batoy
06........Marissa Geels
10........George Blyholder
10........Vitaly Vostrikov
11........Jason Martin
12........Lindsay Rutherford
19........Tamilselvi Marutharaj
22........Leena Philominathan
24........Shuming Zhang
26........Bill Durham
30........Brandon Suttles

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 hours begin Jan. 12
Monday-Thursday ....8 a.m. to 9 p.m.
Friday .................8 a.m. to 6 p.m.
Saturday .............CLOSED
Sunday .............2 p.m. to 6 p.m.

Exceptions
Jan. 5-9 ...............8 a.m. to 5 p.m.
Jan. 11 .................CLOSED

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

2009 CUME Dates

Cumulative exams for graduate students will take place on the following Fridays from 5 p.m. to 6 p.m. in CHEM 144
Jan. 30, Feb. 13, March 6, April 3, April 17

Martin Luther King Day Holiday

The university will be CLOSED in recognition of the Martin Luther King holiday, Monday Jan. 19.