

# The Mole Street Journal

Department of Chemistry and Biochemistry

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September 2012

## Special points of interest:

- New Graduate Students Introduced
- Don Bobbit and Shimadzu Scientific meet on campus
- Koeppe and Greathouse featured in *International Innovation*
- Summer travels and experiences for students
- CUME schedule announced

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## New Graduate Students Join the Department



**Musaab Al Ameer**  
Hometown: Al Kut, Iraq  
B.S. Univ. of Baghdad  
M.S. Al-Nahrain Univ.  
Cell & Molecular Biology



**Eric Barber**  
Hometown: Floral, AR  
B.S. Harding University



**Lin Chen**  
Hometown: Qinqdao, China  
Bachelor Inner Mongolia Univ.  
M.S. Texas A&M, Commerce



**Matthew Jackson**  
Hometown: Memphis, TN  
B.S. Univ. of AR  
Cell & Molecular Biology



**Rande McBrick**  
Hometown: Cookson, OK  
B.S. Northeastern State Univ.



**Valérie McKinney**  
Hometown: Chelsea, OK  
B.S. Northeastern State Univ.



**Jon Moldenhauer**  
Hometown: Stuttgart, AR  
B.S. Valparaiso Univ.



**Matthew Moudy**  
Hometown: Burkburnett, TX  
B.S. Midwestern State Univ.



**Marlena Patrick**  
Hometown: Jefferson, TX  
B.S. Univ. of LA-Monroe



**Colette Robinson**  
Hometown: Horton, KS  
B.S. Kansas State Univ.



**Thaddeus Vasicek**  
Hometown: Tulsa, OK  
B.S. Univ. of Arkansas



**Lucas Whisenhunt**  
Hometown: Kirby, AR  
B.S. Henderson State U.

(Cont. page 3 for Haibin Wu)

## Faculty News

### On the Go

**Bob Gawley** attended the National ACS meeting as a member of the executive committee of the Division of Organic Chemistry and as Program Chair-Elect of the Division, Aug 18-22, Philadelphia.

**Roger Williams** presented a poster "Proton-Conductive, High-Temperature Stable Membranes of Nafion(C)/TiO<sub>2</sub> Nanobelt Composites" at the 2012 NSF EPSCoR Annual Meeting held at Crystal Bridges Museum, Rogers AR.

**Ryan Bauer** gave a seminar entitled "Structural Characterization of Collagenases" at Nippi Inc. in Tokyo, Japan.

Presenting posters at the 26th Annual Symposium of the Protein Society, August 5-8, San Diego, CA, were:

**Arshan Dehbozorgi** presented a poster "Characterization of a Thermostable Quadruple Mutant of Human Fibroblast Growth Factor-1." Other authors of the work are **Rebecca Kerr** and **Suresh Kumar**.

**Alex Jones** presented a poster "Thermodynamic Characterization of a Destabilized Mutant of the Human Acidic Fibroblast Growth Factor." Other authors of the work are **S. Jayanthi** and **T.K.S. Kumar**.

**Julie Tran** presented a poster "Characterization of the Structure of the C-terminal Domain of Alb3." Other authors of the work are **R. Henderson** and **T.K.S. Kumar**.

**Ryan Thurman** presented a poster "Characterization of FGF Receptor Mutations Involved in Disease." Other author is **T.K.S. Kumar**.

**Emily Crossfield** presented a poster "Purification and Characterization of a Novel Affinity Tag." Other authors are **S. Jayanthi** and **T.K.S. Kumar**.

**Bea Kachel** presented a poster "Characterization of W-WAP and Overexpression of Full Length Anosmin in *Pichia pastoris*." Other authors are **J. Morris**, **S. Jayanthi**, and **T.K.S. Kumar**.

**Rebecca Kerr** presented a poster "The Role of Heparin in Fibroblast Growth Factor Signaling" at the NIH-COBRE Symposium, Philadelphia, PA, March 17-19. Other

authors are **Nicole Webb**, **Carmen Padilla**, **David McNabb**, and **T.K.S. Kumar**.

**Matt McIntosh** gave a talk "Industrially Relevant Azole Synthesis via Novel Rearrangement Reactions" at the Telluride Science Research Center meeting on Accelerating Reaction Discovery, Aug. 8, Telluride, CO. He was also a co-organizer of the meeting.

**Bill Durham** was invited to present "Application of metal complex mediated laser flash photolysis to the investigation of the electron transfer pathway in cytochrome *bc<sub>1</sub>*" at a symposium entitled Photochemistry in Biology: Photoinduced Processes and DNA, at the 244th ACS meeting, Aug 19-23, Philadelphia, PA. Other authors are **Jeffrey Havens**, **S. Yang**, **Q. Yuan**, **C.-A Yu**, **Frank Millett**.

### Publications

**Thurman, R., K.M. Kathir, D. Rajalingam** and **T.K.S. Kumar**. Molecular Basis for the Kallmann Syndrome-Linked Fibroblast Growth Factor Receptor Mutation. *Biochem. Biophys. Res. Comm.* DOI: 10.1016/j.bbrc.2012.07.104.

## Koeppe & Greathouse Featured

Drs. **Roger Koeppe II** and **Denise Greathouse** were featured in *International Innovation*, (North America, Issue 1, June 2012), by Research Media Ltd. where they discuss their work on peptide-lipid interactions, which offers potential for understanding membrane protein function and treating in multiply resistant strains of bacteria. The article can be viewed at <http://www.research-europe.com/newsletters/NAI-120612-digitaledition.htm> Please click on "view the full digital edition," then find numbered pages 70-72; actual pages 72-74 in the document, since the first two pages are not numbered.

## Shimadzu Visits Campus

The Arkansas Statewide Mass Spectrometry Facility and the Department of Chemistry hosted a meeting initiated by **Don Bobbitt**, the UA system president and Shimadzu Scientific (represented by Derek Selvidge, Dave Jorissen, and Ben Figard) to discuss potentially upgrading the scientific equipment holdings of the U of A for both teaching and research applications. Shimadzu Scientific has become interested in increasing its influence in the US market, in part by making substantial donations to US colleges and universities. They have had prior successful interactions regionally with Southern Arkansas University in Magnolia, and the University of Texas at Arlington, where they established the Shimadzu Center for Advanced Analytical Chemistry. In fact, it was reported that last year they gave the single largest donation to the University of Texas at Arlington. The aim of this visit to our campus was to explore establishing a similar sort of arrangement with researchers on this campus and perhaps system wide.



Pictured left to right: Don Bobbitt, Derek Selvidge, Dave Jorissen, Ben Figard. Photo and story courtesy of Jack Lay.

## Student News



**Christena Nash** and her husband Will spent part of their summer on a mission trip to Haiti that was sponsored by their church, Center St. Church of Christ. They stayed at an orphanage in Cap Haitien, where they got to know the 63 wonderful children who live there. Because of the climate, building upkeep is an ongoing project so while they were there, they did some painting projects around the orphanage, including a couple of murals. They also made it a priority to spend time with the children in the orphanage, including a day at the beach, which for native Haitians is a rare treat. Another objective was providing relief to some of the families outside the orphanage, so they took bags of rice to families living in the countryside surrounding the city. "Our trip to Haiti was an eye-opening experience and certainly made us thankful for the opportunities and blessings we had previously taken for granted," said Christena.

**Scott and Jacqueline Morris** left August 26 for a 2 week mission trip to Malawi, Africa. They are providing hunger relief for the orphans and widows who live and visit Esther's House, an orphanage and ministry outreach program through CrossChurch in NWA. They are also doing construction on the widows' huts and the orphanage, along with sports ministry. Crafts are being done with the girls through the support of Nehemiah's Wall, a ministry that provides a trade of sewing for the orphans in Malawi, so that when they age out of the orphanage they will have a job skill.

## New Grad Students (cont. from page 1)



**Haibin Wu**  
 Hometown:  
 Chanqchun, China  
 B.S. Lanzhou University

**Ryan Bauer** was part of a FY12 Medical Research Internship Program in Okayama University School of Medicine, Japan. He spent three months in Japan to clone various collagenase fragments to support our "bench-top to bedside" efforts.

Pictured at right is the lab in which he worked.



Matthias Knust, third from right.

As part of the **Rotaract Club of Fayetteville**, **Matthias Knust** helped organize and carry out a pet food drive that concluded with the car & dog wash "Dogs and Wheels" on Saturday, August 18th. With this hands-on commitment, the Rotaracts were able to raise more than 900 pounds of cat and dog food for the local pet food bank "**Ranger's Pantry**." This non-profit program is run by the Community Services Division of the City of Fayetteville. It supports local families during times of economic hardship by providing pet food to those less fortunate. The program has been active for over two years, and has currently given away over 40,000 pounds of dog and cat food to those in need, helping to spare the fate of public animal shelter to hundreds of pets. **Dr. Dan Davis** contributed to the event by paying for the cost of printing the posters advertising the event. More information on the Ranger's Pantry pet food bank can be found on their public page on *Facebook.com*, or by calling 479-575-8260.

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CHAIR, BOB GAWLEY.  
LESLIE JOHNSON, EDITOR

Mailing Address  
CHEM 119  
1 University of Arkansas  
Fayetteville, AR 72701

Phone: 479-575-4601  
Fax: 479-575-4049  
E-mail: cheminfo@uark.edu

We're on the web!  
Chemistry.uark.edu/4842.php  
&  
Department of Chemistry and  
Biochemistry University of Arkansas

## Safety Tip: by Bill Durham

It's the beginning of a new academic year. This is a good time to look around the lab and refresh your mental notes on where the safety equipment resides. Look for the fire extinguisher, safety shower, first aid kit, eye wash, and supply of safety glasses.

  
Department of Chemistry  
and Biochemistry

## Excellence in the Central Science



### Save the Date!

The department is again co-hosting the INBRE conference October 5-6, 2012 with the departments of biological sciences and physics. All events will be held at the NWA Holiday Inn & Convention Center. **Register now** at <http://chemistry.uark.edu/INBRE/3642.htm> Registration closes **September 15**.



*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.*

## Calendar of Events

### September

- 14 CUME
- 15 Registration closes for INBRE Conference
- 17 Department Seminar series begins with Dr. Bradley Smith of Notre Dame University. CHEM 144, 3:30 p.m.
- 24 Dept Seminar—Dr. David Case, Rutgers
- 28 CUME

## Library Hours

### Fall Hours

Monday–Thursday 8 a.m.–9 p.m.  
Friday 8 a.m.–6 p.m.  
Closed Saturdays and Sundays  
Closed Labor Day (September 3)

The chemistry and biochemistry library resources can be accessed in the following LibGuides: <http://uark.libguides.com/content.php?pid=110953>. Please bookmark for future use.

Theses and dissertation resources can be found on the following LibGuide: <http://uark.libguides.com/content.php?pid=123035&sid=1057466>.

## 2012-2013 CUME Schedule

September 14	January 25
September 28	February 15
October 19	March 8
November 9	March 29
November 30	April 10

## A Special Thanks to...

**Dean Todd Shields** sent special thank yous to **Lorraine Brewer** and **Kola Ayinuola** for their assistance during the 2012 First Year Graduate Student Orientation. In addition, Mrs. Brewer also led the Mentoring vs. Advising session. Over 450 students were served during a day of activities designed to give students the best possible start to their graduate studies.

## October

- 1 Department Seminar—Dr. Catherine Murphy, Univ. of Illinois
- 5-6 INBRE Conference
- 8 Department Seminar—Dr. Mark Tuckerman, N.Y.U.
- 19 CUME
- 22 Department Seminar—Dr. Peter Crooks, UAMS
- 29 Department Seminar—Dr. Catherine Larsen, Case Western Reserve University

