

The Mole Street Journal

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Doctoral Candidates Defend Dissertations



Bridgette Blackman



Cynthia Sides



Deepika Talla



Jason Thessing

Bridgette Blackman defended her dissertation “Efficient and Stable Near Infrared Emitters using Band Gap Engineered Quantum Dots for Biomedical Applications,” Nov. 29, under the direction of Xiaogang Peng.

Deepika Talla defended her dissertation “Heat Capacity Changes in Staphylococcal nuclease Packing Mutants and Preliminary Development of an Immunoassay for Thrombomodulin,” Nov. 27, under the direction of Wes Stites.

Cynthia Sides defended her dissertation “X-ray Crystallographic studies of T. fusca Xeg74 Catalytic Domain, Human UDPGlcNAc pyrophosphorylase apo-AGX1, and Quadruple Mutants of Staphylococcal nuclease and the Structural Analysis of Clostridial Collagenase Collagen Binding Domain and S1 Catalytic Domain,” Nov. 30, under the direction of Joshua Sakon.

Jason Thessing defended his dissertation “Interparticle Influence on Size and Size Distribution Evolution of Nanocrystals,” Nov. 30, under the direction of Xiaogang Peng.

Department Scholarships



Iryna Polyakova and Kellie Ong watch as Lauren Edwards receives her certificate from Bill Durham.

The department recently awarded 17 undergraduate scholarships for 2007-2008. Although scholarships are based on financial need, all recipients have a 3.5 GPA or higher. A reception took place Nov. 30 to honor recipients.

Continued inside.

Renovation Earns Another Award

The renovation of the historic Chemistry Building has won another award - Best Education Building Project of 2007 by McGraw Hill’s “South Central Construction” magazine for Alabama, Arkansas, Mississippi and Tennessee. A regional jury selected the award which was presented Nov. 29 in Memphis.

Faculty News

Julie Stenken was honored by Chancellor John A. White and Dean Donald R. Bobbitt at a reception to announce her appointment, Nov. 5.

Research News

Paul Adams was featured in an article "Studying the Proteins that Underlie Cancer," by Melissa Blouin in a recent issue of the Fulbright Review.

The **Kumar** lab recently published two papers.

"S100A13-lipid Interactions—Role in the Non-classical Release of the Acidic Fibroblast Growth Factor." K. M. Kathir, K. Ibrahima, D. Rajalingam, I. Prudovsky, C. Yu, and T. K. S. Kumar. *Biochimica Biophysica Acta* (doi:10.1016/j.bbamem.2007.09.007).

"Secretion without Golgi," I. Prudovsky, F. Tarantini, M. Landriscina, D. Neivandt, R. Soldi, A. Kirov, D. Small, K.M. Kathir, D. Rajalingam, T. K. S. Kumar. *Journal of Cellular Biochemistry*. (doi:10.1002/jcb. 21513).

On the Go

Matt McIntosh gave a research talk "Applications of the Allylic Diazene Rearrangement in Asymmetric Synthesis" at University of Illinois at Chicago Nov. 15.

In November, he gave graduate recruiting talks at Missouri State, TCU and SMU.

Undergraduate students in the **Kumar** lab attended and made poster presentations at the American Society of Cell Biology in Washington, D.C., Dec. 1-5.

Britton A. Blough presented "Understanding the Mechanism of Fibroblast Growth Factor (FGF) Signaling."

Khalil Ibrahim presented "Investigation of the Mechanism Underlying the Anti-Mitogenic Activity of Suramin."

Correction

Paul Adams, and not Ingrid Fritsch, was invited to participate on a review panel for the NSF Molecular Biochemistry Cluster, Oct. 29-31.

Arkansas INBRE Research Conference



The Fall 2007 Arkansas INBRE Research Conference took place Nov. 9-10. More than 400 faculty, researchers, graduate students and undergraduate students from Arkansas and the region participated in the event. This year marks the largest number to ever gather in the disciplines of biology, physics and chemistry and biochemistry.

Undergraduate chemistry major **Khalil Ibrahim** took 1st place in the undergraduate poster category with his presentation "Investigation of the Mechanism Underlying the Anti-Mitogenic Activity of Suramin," Khalil Ibrahim, K. M. Kathir and T. K. S. Kumar.

Each poster was judged by at least three judges selected from various institutions. Awards were given for 1st, 2nd and 3rd place in each discipline. Only one award was given per institution in each area. A total of 95 posters were presented in various categories.

The other winners in the chemistry category were:

2nd place - Yury Kuzmichev, Pittsburg State University, "Resonance Assignment of Double-Stranded DNA using High Field NMR Spectroscopy and its Applications in Determination of its Three-Dimensional Structure," Yury V. Kuzmichev^{*1}, Kyle L. Brown² and Michael P. Stone³. (1) Department of Chemistry, Pittsburg State University, Pittsburg, KS. (2) Department of Chemistry, Vanderbilt University, Nashville, TN 37235.

3rd place - Michael Wainscott, Ouachita Baptist

University, "Using siRNA to Probe p107 Function in Adipocyte Differentiation," Michael Wainscott^{*1} and Timothy E. Hayes², Ph.D., Departments of (1) Biology and (2) Chemistry, Ouachita Baptist University, Arkadelphia, AR 71998.

A complete list of abstracts is available at <http://chemistry.uark.edu/1733.htm>

This conference was sponsored by the Arkansas INBRE with additional support provided by the Arkansas Biosciences Institute. It was hosted by the Fulbright College departments of biological sciences, physics, and chemistry and biochemistry.

Special thanks to the Arkansas Union, Chartwells, Clever-Gifts, the Cosmopolitan Hotel, Eventures, the Fayetteville Town Center, Flying Burrito, Mailco Inc., PMC Solutions, Razorback Transit, and VWR.

The date for the 2008 Arkansas INBRE Research Conference is Nov. 7-8, 2008.

December Safety Tip

**Organic solvents
should not be disposed
down the sinks.
They should be collected for
disposal by Environmental
Health and Safety.**

Undergraduate Scholarships



Dawson Carson



Tyler Rogers



Molly Steen



From left: Maria Super, Kellie Ong and Whitney Gammill

Ed Amis Scholarship

The Ed Amis Scholarship honors the professional accomplishments of former Professor Edward Amis who was world renowned for his research on electron transfer and solvent effects on kinetic phenomena. Amis joined the department as a physical chemist in the 1950s and played a major role in establishing the research program.

- **Will Fraser**, junior from Batesville
- **James Hoffman**, senior from Little Rock

DuPont Chemistry Scholarship

The DuPont Chemistry Scholarship was established through industrial gifts from DuPont-Conoco.

- **Heather Ainsley**, junior from Texarkana, Texas
- **Jennifer Gladden**, sophomore from Dermott
- **Molly Steen**, freshman from Grove, Okla.

Arthur and Lois Fry Scholarship

The Arthur and Lois Fry Scholarships are awarded to chemistry majors with a 3.0 GPA or above, who plan to work in professional chemistry. This scholarship was established by Arthur Fry, University Professor Emeritus, and his late wife Lois.

He joined the department in 1951 and he played a major role in the development of the doctoral program. His pioneering research in the use of C-13, C-14, N-15, Cl-37, and O-18 to study the mechanisms of organic reactions brought international attention to the department and earned him a world-wide reputation as the "father of heavy atom isotope effects in elucidating the mechanisms of organic reactions". Mrs. Fry received a graduate degree in nuclear chemistry from the department and was active in both teaching and research.

- **Megan Huslig**, freshman from Springfield, Mo.
- **Kellie Ong**, sophomore from Klang, Selangor, Malaysia

Honorary Fry Scholars

- **Natalie Anderson**, senior from Springdale
- **Whitney Gammill**, junior from Maumelle
- **Nathan Tobey**, junior from Texarkana, Texas
- **Rachel Thomas**, senior from Fort Smith

Coulter Jones Scholarship

The Coulter Jones Scholarship was established during the 1950s by 1905 alumnus Coulter W. Jones and is awarded exclusively to Arkansas natives. Jones wanted to help students whose path mirrored his own. He was most interested in the recipients "drive toward getting a chemistry degree" than the GPA.

- **Emily Edwards**, junior from Paragould
- **Tyler Rogers**, sophomore from Conway
- **Mary Smith**, freshman from Greenwood
- **Maria Super**, senior from Cove
- **Jessica Sutton**, sophomore from Bryant

Sacks Scholarship

The Sacks Scholarship Fund is named for the late Professor Jacob Sacks and his wife Wilma. Professor Sacks was a faculty member for more than 20 years and was largely responsible for establishing the biochemistry program. Wilma Sacks was a physician with the Arkansas Department of Health and was responsible for establishing many projects in the areas of maternal and child health.

- **Brandon Achor**, freshman from Maumelle
- **Dawson Carson**, freshman from New Boston, Texas
- **Christopher DuVall**, freshman from Tahlequah, Okla.
- **Christopher Hall**, junior from Jonesboro
- **Iryna Polyakova**, sophomore from Rogers

Honorary Scholars

Honorary Scholars are selected for their outstanding academic achievement but no monetary award is given. Students must apply for this recognition.

- **Tammy Binz**, junior from Charleston
- **Kyle Blair**, junior from Rogers
- **Andreas Chen**, junior from Fort Smith
- **Eric Flagg**, senior from Pocahontas
- **Fredisha Manning**, senior from Marion
- **Nicole McClellan**, senior from Collierville, Tenn.
- **Kristin Nagle**, senior from North Little Rock
- **Sidney Winford**, sophomore from Greenwood

Calendar of Events

December

- 03..... Fall seminar series concludes - John Sondek
 04..... Last date to officially withdraw from all full semester classes
 for the fall 2007 and last day of classes
 05..... Department Holiday Potluck
 05..... Dead day, NO CLASSES
 05..... Final copies of master's thesis/doctoral dissertations must be sub-
 mitted to the Graduate School for December 2007 graduation
 06-12 Final exams
 24-Jan.1 U of A CLOSED

Spring 2008 At-A-Glance

January

- 09..... Open registration begins
 14..... Spring 2008 classes begin
 18..... Last day to add a course
 21..... U of A CLOSED Martin Luther King Day

March

- 17-21 Spring Break
 28..... Last day to drop a full semester course with a "W"
 31..... Priority registration begins

April

- 06-10 ACS Meeting, New Orleans

May

- 01..... Last day of classes for spring 2008
 02..... Dead day, NO CLASSES
 03-09 Final exams
 10..... Commencement

- Dates above are also on the Web CT calendar <http://WebCT.uark.edu/>
- For academic dates - <http://www.uark.edu/registrar/classes/calcover.html>
- To see Fulbright College events - <http://fulbright.uark.edu>

The University of Arkansas will be closed Dec. 24 through Jan. 1.

Spring Cume Dates

The cumulative exams for graduate students will be Jan. 18, Feb. 8, Feb. 29, Mar. 28 and April 18. Location to be announced.

Razorback Transit December Schedule

Buses will not operate Dec. 24 through Jan. 1. Reduced service will be provided Jan. 2-11. Full bus service including night and weekend service on all regular routes will resume Jan. 14. See <http://parking.uark.edu/280.htm> for a complete list of changes.

December Birthdays

- 01.....Jennifer Lemmons
 04.....Evgenia Akhmetova
 06.....Nicole Webb
 06.....Jack Thoma
 08.....Raja Dakshinamurthy
 18.....Derek Sears
 18.....Amy Webb
 18.....Jason Thessing

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

December 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.

Closed Saturdays

Exceptions to regular hours in December

- Dec. 12-14 8 a.m. to 5 p.m.
 Dec. 15-16 CLOSED
 Dec. 17-21 8 a.m. to 5 p.m.
 Dec. 22-Jan. 1 CLOSED

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

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.