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Mole Street Journal, March 2014

University of Arkansas, Fayetteville. Dept. of Chemistry and Biochemistry

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Special points of interest:

- Baran to present Fry Lecture
- Cordes memorial service announced
- Biophysical Society meets
- Department represented at Undergraduate Research Conference in Memphis

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Phil S. Baran to Present Fry Lecture

Phil Baran will be our guest lecturer for the annual Fry Lecture Series March 14, 2014. The topic of his talk is "Studies in Natural Product Synthesis."

Phil S. Baran is currently a Professor in the Department of Chemistry at The Scripps Research Institute and Member of the Skaggs Institute for Chemical Biology. Phil received his B.S. in chemistry from NYU in 1997, his Ph.D. at The Scripps Research Institute in 2001 (NSF fellow with KC Nicolaou), and from 2001-2003 he was an NIH postdoctoral fellow at Harvard in the laboratory of Nobel Laureate E. J. Corey. His independent career began in the summer of 2003 and in 2006 he was promoted to Associate Professor with Tenure. In 2008 he was promoted to Full Professor and in 2009 he was appointed to the Skaggs Institute. He has published over 130 scientific articles and has been the recipient of several ACS awards such as the Pure Chemistry (2010), Fresenius (2006), and Nobel Laureate Signature (2003), and several international distinctions such as the Hirata Gold Medal (Japan), the RSC award in Synthesis (UK), and the Sackler Prize (Israel). He is the recipient of numerous young investigator awards such as the Beckman and Searle scholarships and from industrial sponsors, including: Amgen, AstraZeneca, Bristol-Myers Squibb, DuPont, Eli Lilly, GlaxoSmithKline, Pfizer, and Roche. He has delivered hundreds of lectures around the world and consults for numerous companies such as Bristol-Myers Squibb, DuPont and TEVA, and is currently a member of the Eisai scientific advisory board. He is also the co-founder of Sirenas Marine Discovery. His laboratory is focused on the invention of new reactions of broad utility and synthesizing complex natural products in a scalable, economic fashion.

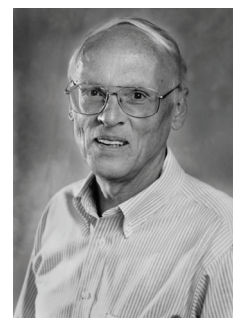
The Arthur Fry Lecture series began in 1997 through a generous donation from alumni, the late Ves Childs, M.S. '60, Ph.D. '63, and his wife Holly, B.S. '62, to honor the late University Professor Emeritus Art Fry's accomplishments and years of unselfish devotion to the department. Both Ves and Holly Childs retired from research positions at the 3M Corporation.

58th Annual Biophysical Society Meeting

The Biophysical Society Annual Meeting is the largest gathering of biophysicists in the world, bringing together more than 7,000 researchers from over 45 countries. The meeting took place this year in San Francisco, California, February 15-19, and the University of Arkansas was proud to be represented by several Chemistry faculty members and students. A listing of the attendees and their presentations may be found on page 2 of this issue of the Mole.

Emeritus Professor Wally Cordes Memorial Service Announced

A memorial for renowned teacher and University Professor Emeritus Wally Cordes will be held at 1:30 p.m. Friday, March 14, in Old Main's Giffels Auditorium. The service will be followed by a reception sponsored by the Teaching and Faculty Support Center, University of Arkansas Faculty Senate and J. William Fulbright College of Arts and Sciences. All members of the university and Northwest Arkansas community who wish to honor Dr. Cordes and his memory are invited to attend.



Faculty News

On the Go

Dr. **David Paul** along with graduate student **Marlena Patrick**, and undergraduate student, **Julianna Grillott** attended the 34th annual Undergraduate Research Conference at the University of Memphis. Julianna presented her oral presentation: "Analysis of polypyrrole and o-phenylenediamine as electropolymerized electrode coatings" on Feb. 22. The conference organizers select about 50 undergraduates each year to present.

Dr. **Paul Adams** and 3 students also attended the 34th annual University of Memphis Undergraduate Research Symposium. **Padmavathy Manavazhahan** presented "Site-Specific Incorporation of an Extrinsic Fluorescence Reporter Groups to Characterize Protein Interac-

tions of the Ras Protein Rheb."

Akash Patel presented "Incorporation of an Extrinsic Fluorescent Probe on the Ras-Related Protein Rheb to Monitor Protein Interactions." **Craig McClean** presented "Optimization of the Thrombin Cleavage for the Rho GDI Protein." Dr. Adams also had a recruiting table at the conference.

Charles Wilkins attended the 26th Sanibel Conference on Mass Spectrometry on Ion Activation from January 30-February 2, 2014, Clearwater Beach, Florida.

Charles Wilkins will be chairing a session entitled "Mass Spectrometry: Omics Environmental and High Throughput Analytical" on Wednesday, March 5, at the Pittcon Conference and Expos 2014 in Chicago, IL. He will also present a paper "High

Resolution Matrix-Assisted in Vacuum (MAIV) by Fourier Transform Mass Spectrometry" in that session. Coauthors for the paper are Beixi Wang, Evgenia Akhmetova, and Sarah Trimpin. He will also be attending the Executive Committee meeting of the Analytical Chemistry Division at Pittcon and representing the Division at a meeting of the Governing Board of the Federation for Analytical Chemistry and Spectroscopy Societies (FACSS), also being held at Pittcon, March 2-6 in Chicago.

Publications

Jingyi Chen, Chapter 18, Noble Metal Nanoparticle Platform, in Cancer Theranostics; Stephen Wong, Shawn Chen, Ed., Elsevier, in press.

58th Annual Biophysical Society

Presentations made at the meeting are listed. Bolded name indicates presenter.

Megan K. Wood, Roger E. Koeppe II, Denise V. Greathouse. "Characterizing Moderately Short Antimicrobial Tryptophan/Arginine-Rich Peptides."

Sushanth Kumar, T.K.S. Kumar. "Is Refolding of Lysozyme Template-Driven?"

Vasupradha Suresh Kumar, Bethany P. Doss, Denise V. Greathouse, **Roger E. Koeppe II**. "Influence of a Central Tryptophan and of Cholesterol on the Properties of Defined Transmembrane Helical Peptides."

Venkatesan Rajagopalan, Denise V. Greathouse, Roger E. Koeppe II. "Influence on Glutamic Acid Residues on the Properties of Model Membrane-Spanning Helices."

Rachael A. Pellegrino, Rebecca Kerr, T.K.S. Kumar. "Understanding the Structural Determinants for the Stability of Human Fibroblast Growth Factor."

Ashley N. Martfeld, Denise V. Greathouse, Roger E. Koeppe II. "Influence of Ph and Histidine Residues on Membrane-Spanning Helical Peptides."

Gayatri Suresh Kumar, David McNabb. "The Abundance of Ergosterol in Candida Species Does Not Influence Fluconazole Sensitivity."

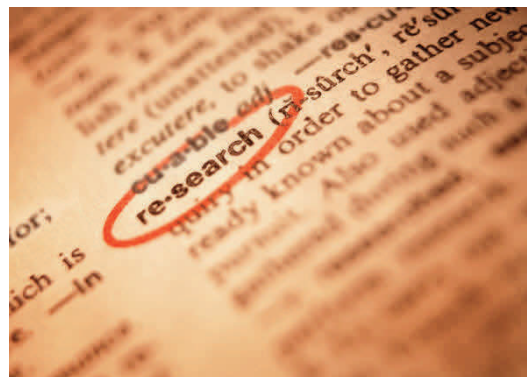
Rory Henderson, Mercede Furr, Srinivas Jayanthi, Alicia Brown, Robyn Goforth, Ralph Henry, T.K.S. Kumar. "Three-Dimensional Structure of the 54-KDA Subunit of the Chloroplast Signal Recognition Particle using Molecular Modeling."

Karina Sanders, Srinivas Jayanthi, T.K.S. Kumar. "Understanding the Structural Determinants of the Extreme Thermal Stability of Rubredoxin."

Taylor Ghahremani, T.K.S. Kumar. "Characterization of FGF-1 Mutant, K126D."

Francis Millett, Jeremy Durchman, Pascal Lanciano, Fevzi Daldal, Bill Durham. "Photoinduced Electron Transfer in the RB. Capsulatus Cytochrome BCI Complex: Rotational Dynamics of the Iron-Sulfur Protein."

Mathias M. J. Bellaiche, Gregory Salamo, Ralph Henry, Daniel Fologea, Eric Krueger, Radwan Al Faouri. "Photoactivity of the Lysenin Protein."



News From IT Services

With the hiring season in full swing, IT Services reminds faculty and staff that visitors from participating universities can access a secure Internet connection on campus using the eduroam wireless network. Visitors will be directed to authenticate using their email address and password from their home institution (for example, user@university.edu).

Conversely, University of Arkansas faculty, staff and students can use eduroam at other participating universities by logging in with their UARK email address and password (for example, user@uark.edu).

The growing eduroam network, funded in part by the National Science Foundation and Internet2 Net+, is available in 54 countries, with 94 active participating institutions in the United States. A link to view participating institutions and more information about eduroam at the University of Arkansas is available at <https://techarticles.uark.edu/298>.

Library Notes

Rare books and materials from the Remnant Trust in Mullins

The University Libraries, the Office of Student Affairs, and the School of Social Work are hosting an exhibit of rare books and materials from the Remnant Trust in Mullins Library in the spring 2014 semester, from Tuesday, January 21 to Monday, May 12. This exhibit represents a once-in-a-lifetime opportunity for visitors to view—and handle—extremely rare materials, ranging from a cuneiform tablet dating to 2200 B. C. to the first printing of the Emancipation Proclamation in 1862. Browse our events pages for a series of lectures that will focus on specific works in the exhibit.

Mango Premiere

Do you speak Mango? If you have tried our easy-to-use language learning tool, [Mango](#), then you know how much fun learning to speak a new language - or brushing up on a language you have studied before - can be. Lessons are self-paced and packed with real-world conversational and cultural tips. You can also download a [mobile app](#) to learn and practice anywhere. If you haven't tried Mango, yet, here's a whole new way to learn: through **movies**. Mango Premiere has just debuted the following full-length feature films, with plans to add more this spring. Current films include:

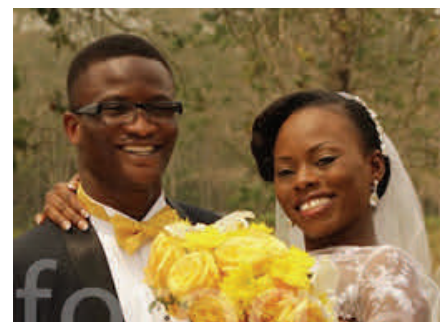
| Language | Film (link to IMDB description) |
|------------------------------|---|
| Chinese (Mandarin) | Kung-Fu Dunk (2008), Little Big Soldier (2010), Ocean Heaven (2010) |
| French | Around a Small Mountain (2009), La Moustache (2005) |
| German | Jerichow (2008), Yella (2007) |
| Italian | Corpo Celeste (2011), Days and Clouds (2007) |
| Japanese | Hospitalité (2010), Negative Happy Chain Saw Edge (2007) |
| Spanish | Colors of the Mountain (2010), Gigante (2009), The Window (2008) |
| English for Spanish Speakers | I'll Believe You (2007), The Diary of Anne Frank (1959) |

The Premiere collection has just launched and is still growing, but you can already study more than 50 language courses on Mango.

Milestones

Kolawole Ayinuola married Tolu'tayo Odetola February 14th and 15th in Akure SW Nigeria. Tolu'tayo has a master's degree in Agricultural Development Economics from the University of Reading UK and is presently a Senior Research Assistant at the International Food Policy Research Institute (IFPRI) with head-

quarters in Washington DC. Kola is a Ph.D. candidate in the McIntosh lab.



Excellence in the Central Science

Paul Lab Attends Conference



Pictured above are Professor David Paul, undergraduate student Julianna Grillot, and graduate student Marlena Patrick. They attended the 34th Annual Undergraduate Research Conference at the University of Memphis, where Julianna gave an oral presentation (see "On the Go").

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

March

- 01 Deadline for submitting proposals to Committees
- 03 Seminar, Marcia Levitus, Arizona State Univ.
- 10 Seminar, So Hirata, Univ. of Illinois at Champaign Urbana
- 14 Cordes Memorial Service, 1:30 Giffels
- 14 Fry Seminar, Phil S. Baran, The Scripps Research Institute, 4:15, CHEM 132
- 14 CUME, Chem 201, 5-6 pm
- 24-28 Spring Break (Staff has 28th off)
- 31 Seminar, John T. Yates, Univ. of Virginia



Save the Date!

The 2014 INBRE conference will be held November 7-8 in Fayetteville, AR.

Library Hours

CHBC Library (CHEM 225)
<http://libinfo.uark.edu/chemistry>
575-2557

Spring Semester Hours: January 13—May 11

| | |
|-----------------|---------------|
| Monday—Thursday | 8 a.m.-9 p.m. |
| Friday | 8 a.m.-6 p.m. |
| Saturday—Sunday | Closed |

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>.



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&
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Safety Tip: by Bill Durham

If you are working with thiols or phosphines that smell bad, have a beaker of fresh Clorox nearby so that you can destroy minor traces on spatulas, disposable pipets, etc. Clorox will oxidize many of these compounds to nonvolatile materials.



Department of Chemistry
and Biochemistry