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The Mole Street Journal

Volume 7, Issue 8

Stites Promoted to Professor

Wes Stites has been promoted to the rank of professor.

Since joining the faculty in 1991, Stites has served on numerous committees at the department, college and university levels and has advised and mentored students. He developed a course "Forensic Chemistry," and received the University of Arkansas Teaching Academy Outstanding Undergraduate Mentor Award in 1997.

Among his greater contributions was his role in the long-awaited renovation of the Chemistry Building. He wrote the proposal for seed money from NIH and served as the department liaison through the entire construction process.

He is recognized as one of the top researchers in the world on understanding how proteins fold and generated the largest set of multiple mutants in a protein ever made.

Currently, he is investigating the characterization of thrombomodulin oxidation in endothelial cells exposed to tobacco smoke and other oxidative stresses. His hypothesis is that smoking increases methionine oxidation of thrombomodulin, which could account for the higher incidence of heart attack and stroke in smokers.

Although he never served in the armed forces, he has consulted the U.S. Army about biological and chemical

weapons assessment.

Recently, he served on the Pine Bluff Citizen's Advisory Commission, which provided local oversight to the destruction of chemical weapons at the Pine Bluff Arsenal.

Stites was born in Ponca City, Okla. He holds a doctorate in biochemistry from the Massachusetts Institute of Technology. He earned bachelor's and master's degrees from The Johns Hopkins University, where he returned on an NSF Postdoctoral Fellowship and received the Johns Hopkins University School of Medicine Award for Postdoctoral Basic Science Investigation. He was also named Postdoctoral Fellow of the Institute for Biophysical Research on Macromolecular Assemblies.



Wes Stites

Students Share Tony Jude Award



Nikita Patton and Ivy Fitzgerald

Two REU students shared the Tony Jude Award for outstanding research.

Ivy Fitzgerald and **Nikita Patton** received the award named for former university and REU alumnus Tony Jude who passed away at the early age of 30.

Fitzgerald's research "Designing Fibroblast Growth Factor with Higher Heparin Binding Affinity," was under the direction of mentor **Suresh Kumar**. She is from Hood River, Ore., and is a student at Agnes Scott College and attended Cottey College.

Patton's research "Preliminary Characterization of the Binding of Peptide Derivative of an Important Ras GTPase Binding Effector for Abnormal Cell Signaling Mutants of the Ras Protein Cdc42," was under the direction of mentor **Paul Adams**. She is from Louisville, Ky. and attends Bennett College for Women.

More about the 20th REU program and other summer programs inside.

Symposium to Honor Wilkins

A symposium to honor Charles L. Wilkins and his contributions to fields in analytical chemistry is Saturday, Sept. 13 in the Chemistry Building.

All faculty, researchers, graduate students and interested parties are invited to participate.

A list of national speakers and titles is listed at the Web site below.

Deadline to register is Sept. 5.
<http://chemistry.uark.edu/2184.htm>

Faculty News

On the Go

NIH NCRR 2nd Biennial National IDEa Symposium

Aug. 6-8, Washington D.C.
Arkansas COBRE participants will make poster presentations.

Frank Millett will present "Design of new Photoactive Ruthenium Complexes to Study Rapid Electron Transfer in Cytochrome Oxidase," and "Core Facilities for Determination of Protein Structure and Function: A Statewide Resource for NCRR COBRE and INBRE Investigators in Arkansas."

Rachel Ellis will present "Properties of Peptide-Anchored Lactoferricins in Neutral and Anionic Lipids."

Fei Guo will present "Histidine254 of Synaptotagmin I C2A Domain Coordinates with Cu²⁺."

Juliette Rivero will present "Toward the Total Synthesis of Antascomicin B via in Ireland-Claisen and Allylic Diazene Rearrangement Sequence."

Paul Adams will give an invited lecture "Biophysical Characterization of Proteins Associated with Signal Transduction," at the National Science Foundation Aug. 17-19. This research is funded by the NSF Research Initiation Grant (RIG) he received in April.

Frank Millett gave an invited lecture "Rapid Kinetic Studies of Electron

Transfer in Cytochrome Oxidase" at the 15th European Bioenergetics Conference 2008 at Trinity College Dublin in Dublin, Ireland, July 19-24.

Research News

A paper by the Sakon group was recently published in the journal *Biomolecular NMR Assignments*. "1H, 13C and 15N Resonance Assignments of Ca²⁺ Bound Collagen-binding Domain Derived from a Clostridial Collagenase," **Sagaya T. Leena Philominathan**, Osamu Matsushita, **John Brad Jordan** and **Joshua Sakon**, DOI 10.1007/s12104-008-9102-z.

Alumni News

Class of 2008 Career Plans

Fredisha Manning will attend dental school at the University of Louisville.

Kristin Nagle plans to take a year before pursuing optometry school.

Preston Stewart plans to work in industry after spending the summer in India as part of a campus ministry.

Graduate school

Natalie Anderson currently works for NN-Labs Inc. She plans to take a year off before graduate school.

Randy Carney will attend graduate school in material science at MIT on an NSF Fellowship.

Zach Donnell will pursue graduate studies in molecular biology at Princeton University.

Chris Sichmeller will attend graduate school in chemistry at the University of Wisconsin.

Medical school

Chris Carter and **Tara Teff** will attend UAMS.

Eric Flagg will attend Washington University.

Pharmacy School

Heather Ainsley, **Brittany Goings**, **Megan Mainord-McDaniel** and **Whitney Tharp** will attend UAMS.

Drew Bockenfeld will attend Washington University.

Nicole Hart McClellan will attend the University of Tennessee - Memphis.

Other News

Cassie Bruns, B.S. '03, is an associate chemist with Midwest Research Institute in Kansas City.

Julie Chittenden, Ph.D. '07, will be a postdoc this fall at the NASA Ames Research Center in California.

Tracey Jackson, B.S. '96, Ph.D. '01, is a senior specialist in the Corrosion Section of the Technical Support and Development Function at Champion Technologies in Fresno, Texas. His job is to manage projects that involve electrochemical testing of

chemicals used to suppress corrosion of iron in corrosive oil field environments.

Buddy (Charles Mack) Neeley, B.S. '65, Ph.D. '69, and **Anita Rohrer Neeley**, M.S. '70, recently visited the department while in Fayetteville to celebrate their wedding anniversary — at the location where they met. He is retired from Eastman Kodak and she is retired from Killgore College in Longview, Texas. His research mentor was Burdon Musgrave and her research advisor was John Thoma.



Buddy and Anita Neeley

Leah Bullard Sheridan, B.S. '05, joined John Stickney's research group at the University of Georgia in January. The group's focus is on the use of electrochemical atomic layer deposition (EC-ALD) to make thin films of semiconductors, metals and super lattices.

Jay Staiger, Ph.D. '07, works in bio-tech process development in St. Louis.

Shauntae Moore Staiger, Ph.D. '05, works in the method validation group in the quality control department at Sigma in St. Louis.

Ellen Young, Ph.D. '83, is a research associate in the department of microbiology and immunology at The University of North Carolina at Chapel Hill.

In Memory

Bernard F. Armbrust, Jr., M.S. '55, died May 4, 2008. He served in the U.S. Army combat engineers in both World War II and the Korean War. He retired from Reynolds Metals Company in 1987.

Summer Research Programs

Students in the REU and INBRE summer research programs and HHMI students presented their research Thursday, July 24. INBRE students presented their research in Little Rock.

REU Presentations

Christena Hooten, University of Arkansas, "Investigations of an Immunoassay-Compatible Redox Species for Microfluidic Pumping with Magneto-hydrodynamics," mentor: **Ingrid Fritsch**.

Chris Ladner, Spring Hill College, "The Enhancement of In Vitro Microdialysis Recovery of Interferon- γ Using Affinity Agents," mentor: **Julie Stenken**.

Will Newhart, Missouri Western State University, "Enhanced Relative Recovery of Cytokines in vitro: A Microdialysis Study," mentor: **Julie Stenken**.

Sean Nomoto, University of Wisconsin - River Falls, "Exploratory Hierarchical Nanomachining of New ZnO Tertiary Hetero-Nanostructures," mentor: **Ryan Tian**.

Ashley Ramsey, University of Arkansas at Monticello, "Analysis of Methionine Sulfoxide from Urinary Proteins in Relation to Tobacco Use," mentor: **Wes Stites**.

Michelle Reed, Adams State College, "Development of Polyeugenol Coated Electrodes for Chemical Sensors," mentor: **David Paul**.

Scott Robotham, Nebraska Wesleyan University, "Analysis of Plasma Polymerized Acetylene Films on Silicon Chips by Fourier Transform Mass Spectrometry," mentor: **Charles Wilkins**.

Andrew Ward, University of Detroit Mercy, "Racemization of Chiral Lithium Carbanions: An Exercise in Organic Synthesis, Analytical Chemistry, Solution Kinetics, and Chemical Thermodynamics," mentor: **Bob Gawley**.

INBRE Presentations

Holly Crouch, Arkansas Tech University, "The Effects of Aging on the Immune System," mentor: Jeannine Durdik (BIOS)

Ashley Fredrick, Arkansas Tech University, "Studies toward the Oxidation and Alkylation of Sulfides using Sulfonyl Chlorides and Alkyl Sulfonates," mentor: **Matt McIntosh**.

Faith Hurd, University of Arkansas at Pine Bluff, "Solid Phase Synthesis, Fluorescence Labeling, Purification, and Membrane Interactions of Lactoferricin Peptides," mentor: **Denise Greathouse**.

Joel Starch, John Brown University, "Methionine Oxidation Strategy for Determination of Protein Folding Energy of Ubiquitin," mentor: **Wes Stites**.

HHMI Presentations

Freshmen - **Maci L. Dickson**, **Casey A. Vickerson**, **Braden L. Moyer**, **A. J. Salois**, and **Jonathan Redeker** "Biomolecular Signaling."

Sophomores - **Rachel Lee**, **Matthew Naglak**, **Kellie Ong**, **Olena Pickett**, **Iryna Polyakova**, and **Hiroko Takeuchi** "Developing and Visualizing Nano-Carriers for Cellular Drug Delivery"

The HHMI program involves faculty in biology, physics and chemistry and biochemistry.

Department faculty involved are **Denise Greathouse**, **Roger Koepe**, **David Paul** and **Xiaogang Peng**. **Leslie Johnson** is the program administrator. Graduate students **Johanna Froyd-Rankenber** and **Susan Grisham** are teaching assistants together with Nathan Lewis in biological sciences.

Physics faculty are Lin Oliver and Greg Salamo. Biological Sciences faculty are Ralph Henry, Michael Lehmann, David McNabb and Ines Pinto. Program research associate is Daniel Folega.

Chancellor's List

52 undergraduate chemistry majors made the spring 2008 Chancellor's List.

Heather A. Ainsley
Natalie Jee Anderson
Andrew Hunter Avery
Kyle G. Blair
Laura Ann Bradney
Lindsey Renee Brown
Joshua David Brown
Geri Elizabeth Burkett
Jacob Blythe Burns
Christopher Broyles Carter
McKinley E. Case
Kaitlin Ann Castleberry
Courtney J. Chandler
Eric Ross Flagg
Amir V. Francis

Whitney Marie Gammill
Lauren A. Hall
Dartagnan F. Hinds
Lukas Graham Hockman
Khalil Ibrahim
Sigrid Leigh Johannesen
Matthew E. Kern
Shigehiro Komatsu
Rodney Lloyd LaGrone Jr.
Jacob L. Lavender
Fredisha Lamere Manning
Nicole Hart McClellan
Charles Austin McClure
Catherine Alexander Moll
Kristin Leigh Nagle
Kellie Li-Li Ong
Megan C. Phillips
Mark William Pickhardt
Kendall Michelle Polansky

Jessica N. Preston
Christina Elizabeth Ragland
Ronald Lee Rideout
Miles Louis Ritter
Omar M. Salem
John Marc Shellenberger
Elizabeth Suzanne Srader
Jessica Dawn Sutton
Tara Beth Teff
Whitney H. Tharp
Rachel Elizabeth Thomas
Nicholas D. Tingquist
Daniel T. Vo
Kristin Ann Watson
Kirby N. Welston
Blake Anthony Williams
David T. Williams
Sidney Gene Winford

August Safety Tip

Just because
you feel OK
does not mean
you are not
poisoning
yourself!

Calendar of Events

August

- 08..... Last day of summer session II
 15..... Undergraduate admission deadline for fall
 18..... New student orientation
 21..... Meet the graduate students lunch
 24..... Last date to receive 100% cancellation of fees for an Official
 Withdrawal for fall 2008
 25..... First day of fall classes
 29..... Last day to register or add a course

September

- 01..... Labor Day - U of A CLOSED
 05..... Last day to drop a full semester course without a "W"
 08..... Fall seminar series begins
 13..... Symposium to Honor Charles L. Wilkins

October

- 01-04 64th Southwest Regional ACS Meeting, Little Rock
 08..... Early progress reports for 1000 and 2000 level classes will be
 e-mailed to students UARK account
 09..... Department picnic - The Gardens
 31..... Last date to drop a full semester course with the mark of "W"

November

- 03-14 Priority registration for Spring 2009 for currently enrolled students
 07-08 INBRE conference
 26..... Fall break - no classes
 27..... Thanksgiving - U of A CLOSED
 28..... U of A CLOSED

December

- 08..... Seminar series concludes
 09..... Last day of fall classes
 09..... Last day to officially withdraw from all courses
 10..... Department Holiday potluck
 10..... Dead day - no classes
 10..... Final copies of master's thesis and doctoral dissertations must be
 submitted to the Graduate School for students graduating in
 December 2008
 11-17 Final exams
 24-31 U of A CLOSED

Meet the New Grad Students Luncheon

The department will welcome 11 new graduate students at the annual luncheon Thursday, Aug. 21 at noon in CHEM 105 and CHEM 118.

WebCT to Change to Blackboard

WebCT will change to Blackboard for fall 2008. The department site will soon change to the new system. Don't wait until the last minute to review the new system or to request a course site.

August Birthdays

- 02..... Frank Millett
 03..... Brandon Ayers
 04..... Susan Grisham
 05..... Richard Smart
 11..... David Parette
 14..... Grace Ong
 14..... Charles Wilkins
 17..... Joseph Smeal
 19..... Neil Allison
 21..... Maha Shrestha
 22..... Paul Adams
 23..... Jerry Homesley
 27..... Jennifer Sims
 27..... Richard Fleming

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

Summer hours

- Monday - Thursday.... 8 a.m. to 6 p.m.
 Friday 8 a.m. to 5 p.m.
 Saturday CLOSED
 Sunday..... CLOSED

Fall hours begin August 25

- 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 to fall hours

- Aug. 31.....CLOSED
 Sept. 1CLOSED
 Nov. 25-268 a.m. to 5 p.m.
 Nov. 2.....CLOSED
 Nov. 28.....CLOSED
 Nov. 30.....CLOSED
 Dec. 17-19.....8 a.m. to 5 p.m.
 Dec. 21CLOSED
 Dec. 22-23.....8 a.m. to 5 p.m.
 Dec. 24-Jan. 1CLOSED

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

64th Southwest Regional ACS Meeting

Little Rock, Oct. 1-4
<http://www.swrm.org/>