



Chemical Bond

**Volume 54
Number 7
October 2003**

St. Louis Section, American Chemical Society



**Kristin Bowman-James
59th American Chemical Society
Midwest Regional Award**

2003 St. Louis Section Chemical Technician Award Call for Nominations

The St. Louis Section Chemical Technician Award is presented to a chemical technician in the St. Louis area who has demonstrated a high degree of professionalism as a chemical technician. Criteria used to judge the award include technical skills, safety and housekeeping, relationship with co-workers, presentations, reliability, communication skills, contribution to team efforts, and additional professional activities. The award will consist of a plaque, a check for \$250.00, dinner for the awardee and a guest at the Chemical Progress Week Awards Night ceremony, and nomination for the National Chemical Technician Award. The award will be presented at the Awards Night Banquet in April of 2004.

A chemical technician is a person whose training includes successful completion of an Associate or Bachelor Degree in chemistry or a chemistry-related curriculum, or the equivalent knowledge gained by experience. The primary work of a chemical technician is conducting experimentation and/or correlating information to assist in the solving of chemical problems.

Letters of nomination must be received by Sue Dudek, Pharmacia Corp., mail code T2J, 800 N. Lindbergh Blvd., St. Louis, MO 63167 by October 31, 2003. Nominations, including seconding letters, must not exceed six pages. The nominating letters should address each of the criteria above. A current work address, phone number and fax number must be provided for each nominee. Please include an e-mail address if one is available.

Chemical technicians need not be a TECH Division Affiliate or ACS member to be eligible for this award. This award is administered by the St. Louis Section of the American Chemical Society (ACS).

For more information contact Sue Dudek at 314-274-2464,
FAX 314-274-4426, susan.dudek@pharmacia.com

National Chemistry Week's
Day at the Science Center
will be on October 25th from 10:00 am to 4:00 pm.

There will be an academic/industrial exposition, with displays and hands-on activities for children. Anyone interested in participating should contact:

Michael J. Shaw
michsha@siue.edu
618-650-3579
All are welcome!

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Meeting & Seminars

Board of Directors

St. Louis Section–ACS Board of Directors meets on a Thursday of each month, at the Alumni Center, University of Missouri–St. Louis. The usual meeting day is the second Thursday of each month, but meetings and other events have caused a change in the October meeting to the third Thursday of the month. Meetings are open to all members, and all are encouraged to attend. Elected officers and chairs of major committees have the right to vote; others in attendance have voice but no vote. If you want to attend the dinner, please contact Leah O'Brien (lobrien@siue.edu or 618-650-3562) at least one week prior to the meeting date. The usual cost of dinner is \$15. Members wishing to become active in section activities are welcomed for their first dinner compliments of the section.

Date: Oct. 16

Social hour: 5:30 pm

Dinner: 6:30 pm

Business meeting: 7:15 pm

Future meeting: Nov. 13

Washington University

Seminars are in McMillen 311 at 4 pm unless otherwise noted. Coffee is available 20 minutes prior to the talk, and refreshments follow. For information, contact:

Amy Walker

walker@wuchem.wustl.edu

An up-to-date list of seminars is available at:

[www.chemistry.wustl.edu/
~seminars/seminars.html](http://www.chemistry.wustl.edu/~seminars/seminars.html)

University of Missouri- St. Louis

Seminars are held on Mondays at 4:00 pm in Room 451 Benton Hall unless otherwise specified. Refreshments 15 minutes prior to seminar time. (www.umsl.edu/chemistry)

October 6

Dr. Geert-Jan Boons

Univ. of Georgia, Athens, GA
*Complex Glycoconjugates:
New Synthetic Methods and
Probing Biological Functions*

October 13

Dr. Charles C. Chusuei

Univ. of Missouri, Rolla, MO
*Nanoscale Au Clusters Solution
Deposited onto Metal Oxide
Supports for CO Decomposition*

October 20

Dr. Prashant V. Kamat

Univ. of Notre Dame, IN
*Photoresponsive Organic-
Inorganic Hybrid
Nanostructures*

October 27

Dr. Jacquelyn Gervay Hague

Univ. of Missouri
Columbia, MO
*Glycosyl Iodides in
Organic Synthesis*

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Synthetic Organic Chemistry (SOC) Discussion Group

We have just initiated a new Synthetic Organic Chemistry (SOC) discussion group for the Greater St. Louis Area. The meetings will occur once a month, typically on the third Wednesday of the month, and will focus on current issues in organic chemistry while serving as a vehicle for bringing together synthetic chemists within our community. Our first organizational meeting will be held on:

Wednesday, October 22

St. Louis University
Kelley Auditorium
(lower level lecture halls,
just next to Chem. Dept.)

and will feature a new member of the St. Louis community:

Prof. Vladimir Birman

Washington University
*"The Total Synthesis
of Merrilactone A"*

Please convene for refreshments at 5:30 pm, welcoming remarks and suggestions from the participants will start at 6 pm, and the presentation will follow.

Parking will be available at the Olive Parking Garage, corner of Olive Blvd. and N. Compton Ave. The lower level lecture halls and Chem. Dpt. are located just behind the soccer stadium. If you need directions, contact Olivier Nicaise at 977-2853 or nicaiseo@slu.edu.

If you are interested in participating, and would like to make suggestions regarding the organization of the SOC

discussion group, or at best would like to make a presentation at a future meeting, please contact one of the organizers listed below:

Prof. Olivier Nicaise
St. Louis University
(314) 977-2853
nicaiseo@slu.edu

Prof. Kevin Moeller
Washington University
(314) 935-4270
moeller@wuchem.wustl.edu

St. Louis University

Seminars start at 3:30 pm in Room 204 Macelwane Hall, unless noted otherwise. Refreshments follow. For more information, contact Paul Jelliss, jellissp@slu.edu.

October 1

Prof. Edward Gillan
Dept. of Chemistry
Univ. of Iowa

October 8

Dr. Christopher E. Bunker
Air Force Research Laboratory
Wright-Patterson AFB

October 15

Prof. Stanley Manahan
Dept. of Chemistry
Univ. of Missouri, Columbia

October 27

Prof. Brian T. Cooper
Dept. of Chemistry
Univ. of North Carolina, Charlotte

November 12

Prof. Christopher T. Culbertson
Dept. of Chemistry
Kansas State University

To Clone or Not to Clone

by Jack Bornmann

The word abortion is a very emotionally charged word. Some people fervently support the right to an abortion by those who want it, whereas there are others who are fervently, or even violently, opposed to abortions for anyone.

Letters & Words More

Clone is another emotionally charged word.

Some people oppose cloning because the success rate is so small. But cloning is a new technology and a low success rate is not uncommon in a new technology. Do you remember the TV pictures of NASA's early attempt to launch a rocket? The early attempts blew up on the launch pad. One rocket managed to rise about twenty feet off the pad before collapsing to the ground and then exploding. It is not only technology that struggles for success in the early stages. My mother had four miscarriages (spontaneous abortions) before I was born. Where would I be if someone had convinced my mother to stop trying because her success rate

was so low?

In last month's column I tried to point out that not every egg launched from an ovary gets fertilized, not every fertilized egg replicates successfully to form a zygote, not every zygote begins to differentiate successfully to form an embryo, not every embryo successfully implants itself in a uterine lining. We do have still-births, we do have babies born with serious birth defects, and we do have babies who "fail to thrive." We have couples who never have children of their own. Success is not guaranteed.

A well-educated person said, "The idea of cloning genetically identical individuals seems terrifying." Do mothers who have given birth to genetically identical twins find them terrifying? Do the twins themselves find it terrifying to view their identical twin?

Someone else said that they would be horrified to encounter a clone of themselves approaching on a sidewalk. Apparently many people believe that the clone will look just like the donor. First of all the clone will be born a baby. By the time the clone reaches adulthood, the adult donor of the genetic material will be approaching middle age. In addition it is not "nature or nurture." In actuality it is "nature and nurture." Nature (genetics) provides the blueprint for the new person. But the nurture (environment) of the womb and the

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environment experienced by the person after birth makes us different. It is rare that identical twins cannot be identified separately. Insignificant and significant events alter our appearance. A clone is not going to be identical to the donor, nor even identical to what the donor had looked like.

Some people claim that the clone loses its individuality. Why do these people worry about individuality? There are no individuals in a mob. Look at the lack of individuality when the crowd goes wild after a sports event. At rush hour take a look from an overpass at the cars flowing underneath and then think of those lines of mindless ants running along some imaginary line. Where is the individuality in "road rage"? I think we

all need more individuality and more individual responsibility.

Some religious people have declared that a clone has no soul. I wonder how they can tell. People have been trying for centuries to prove that there is indeed a soul. The Bible says that there is a soul, but I have never found a passage in the Bible that says that clones do not have a soul. I guess such religious people believe that when we humans are given a soul to go with our body, we use up the allotment and there is not another soul available for the poor clone.

The decision to clone or not to clone should be a logical decision and not an emotional decision. Unfortunately, so many people are not able or not trained to make logical decisions.

Battle of the Burets

This contest for high school chemistry students will match teams from local high schools against one another in a test of titration speed and accuracy. Teams will participate in heats with the winner of each heat advancing to the championship round. Trophies will be awarded to the heat winners and the winning school.

The contest will be held on:

Wednesday, October 29, 2003

at St. Louis Community College - Florissant Valley.

The first heat will commence promptly at 6:00 PM.

For more information on how to enter a team from your high school contact:

Bruce Ritts

314-290-4744

bruce_rittts@steris.com



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Nominees for Office - 2004

St. Louis Section-ACS

The Nominating Committee presents the following candidates for office to the St. Louis Section-ACS for 2004. All members of the St. Louis Section are eligible to vote. Please mark the enclosed ballot, following the instructions printed on the reverse side, and return no later than October 31, 2003. Ballots postmarked after that date will not be counted.

Chair-Elect (vote for one)

Theodore C. Gast: Professionally affiliated with the Carl F. Gast Company; Section activities include the development and promotion of Kids & Chemistry since its inception in 1996 and serving as Science Fair Judge for the past several years up to the present. Ted has been more recently involved in fundraising activities for the Section through the American Chemistry Council (since November of 2002).

Secretary (vote for one)

Keith J. Stine: Associate Professor of Chemistry and Biochemistry, University of Missouri-St. Louis. Section Activities include Midwest Award (1993), Surface Science Discussion Group (1993-1999), Materials Chemistry Discussion Group (2000), Saint Louis Award (1998-2000), Alternate Councilor (1997-1999), Director (2001), Career Day (2001-2003), Secretary (2002, 2003), Program Chair - 35th ACS Midwest Regional Meeting.

Treasurer (vote for one)

Bruce Ritts: Senior Scientist, Steris Corporation; (2002-2003); Section activities include Treasurer (2002-2003); Director (2001); Publicity and Public Relations; Committee chair (2000); Chemical Progress Week (1997-1999, 2001-2002); Program Committee chair (1996); Education Committee chair (1994, 1995); National Chemistry Week coordinator (1993); Donation Committee chair (1992).

Councilor (vote for one)

Sadiq Shah: Director, Office of Technology Transfer, Western Illinois University; Section Activities include Councilor, Alternate Councilor; Section Chair (1993); and on the National level: subcommittee on Ethics &

Professional Affairs; Professional Programs Subcommittee; Committee on Economic & Professional Affairs.

Director (vote for three)

Greg Wall: Sigma-Aldrich Corporation, Technical Service. Section Activities include Career Awareness Fair chair, General Topics chair, and Public Outreach chair. He has previously served as Career Awareness Fair chair, General Topics chair, Public Outreach chair, Program Committee chair, and Chair of the Section (1996).

Samir El-Antably: Founder and President, Camela Medical Equipment Compan. Section Activities include Chair of several committees; Director; Alternate Councilor; Section Chair (1982); St. Louis Section Distinguished Service Award recipient (1996).

Bob Devino: Bio not available.

Alt. Councilor (vote for two)

Lisa Balbes: Balbes Consultants. Current activities at the section include Webmaster; Immediate Past Chair and Career Resource Coordinator for St. Louis Section; Webmaster for COMP Division; Career Committee for CINF Division; and Career Consultant and Presenter for ACS/Career Services; PR chair and Computational Chemistry Discussion Group chair; PR chair and NCW Committee for Columbus OH section.

Mike Shaw: Associate professor of Chemistry at SIUE. Activities for the section include: organizing the Undergraduate Research Symposium in 1999 and 2000 (with Don Becker), coordinating the Student Affiliate Sections in the St. Louis region, and organizing the 2003 Day at the Science Center during National Chemistry Week (with Eric Malina), and replacement director in 2001-2002.

Pick up

rotating

Mass-Vac ad

from p. 7 of January 2003

2003 Midwest Award: Professor Kristin Bowman- James

Professor Kristin Bowman-James of the University of Kansas, the recipient of the 59th American Chemical Society Midwest Regional Award, was educated at Temple University and at the Israel Institute of Technology and Ohio State University. She joined the chemistry faculty of the University of Kansas in 1975. She has been a visiting researcher at the Université Louis Pasteur in France with the Nobel laureate Jean-Marie Lehn, and at the California Institute of Technology with Harry Gray. She served as chair of the Kansas Department of Chemistry from 1995 to 2001.

Professor Bowman-James's achievements have earned her a number of awards, most recently the Iota Sigma Pi Award for Professional Excellence (2002), the American Chemical Society Women Chemists Committee Award for Diversity (2002), and the Dolph Simons Sr. Award for Research Achievement in the Biomedical Sciences (2002).

Bowman-James's research in molecular recognition is a major basis for the Midwest Award. Her professional colleagues in this area noted the she is



“one of the world's leading experts” in supramolecular chemistry who has had a “valuable impact on my own thinking and that of many others;” that her work on metal-based phosphate cleavage has “set a standard for artificial enzyme efficiency that has rarely been surpassed.” Others praised her “intellectual agility and creativity in moving into new areas,” such as the “long-known but largely neglected area of anion complexation.” They pointed out that she “jump-started” research in this area by the paradigmatic power of her idea of a fruitful analogy between ligand-anion and metal-anion recognition.

Bowman-James has also contributed to public understanding and support of chemistry and chemical education through service to the Council on Chemical Research, the American Chemical Society, and research support agencies of the U.S. Government. She is a leader in advancing the cause of diversity and inclusiveness in chemistry. Following her work as its chair, the Kansas Chemistry Department now has a larger fraction of women faculty members than any other American department.

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Intellectual Property: You mean there are legal ownership rights to ideas and know-how?

Sadiq Shah

Office of Technology Transfer
Western Illinois University

Before we talk about the ownership rights, it is important to talk about what we mean by Intellectual Property (IP). IP is the knowledge base that has some usefulness for the society. The examples may include photographs, paintings, sculptures, music, a play, choreography, an article, a book, a computer program, a new design, a logo, a new material, a new process, a unique mixture of existing materials with new properties, a new plant, the know-how and others. The U.S. Constitution gives congress the power to - promote the sciences and useful arts, by securing for limited time authors and inventors the exclusive rights to their respective writings and discoveries. However, the ownership rights do make a distinction between the original authors, inventors, employers or those contracted to complete the work. The ownership rights are analogous to owning real estate that can be sold, inherited, licensed and used to secure loans. These ownerships rights are protected under the intellectual property laws. These laws are generally divided into four categories including: patents, copyrights, trademarks and trade secrets.

Stay tuned for more on these topics and associated ownership rights in the future Chemical Bond issues.



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