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MARCH • 2006

CHICAGO SECTION AMERICAN CHEMICAL SOCIETY

Biannual Public Affairs Lecture

FRIDAY, MARCH 17, 2006

Café La Cave
2777 Mannheim Road
Des Plaines, IL 60018
847-827-7818

DIRECTIONS TO THE MEETING

From 290 East/West - Take 290 from either direction and exit 294 North. Continue until you reach the exit for 190 West (to O'Hare). Exit and immediately pay toll. Exit onto Mannheim Road North. Go North for 1.5 miles. The restaurant is on the right side after the second stoplight.

From 90 East/West - Take 90 from either direction and exit 190 West (to O'Hare). Then follow 290 East/West directions given above.

From 294 North/South - Take 294 from either direction and exit 190 West (to O'Hare). Then follow 290 East/West directions given above.

From 88 East - Take 88 East to 294 North. Take 294 and exit 190 West (to O'Hare). Then follow the directions for 290 East/West given above.

PARKING: Go directly to parking lot for self-parking. Valet parking also available.

TOPICAL GROUP 5:00 - 6:00 P.M.
"Targeted Libraries--The Design and Synthesis of Novel, Potent and Selective Kinase Inhibitors" presented by **Dr. Irini Zanze**, Research Investigator, Medicinal Chemistry Technologies Group, Abbott Laboratories (see page 2)

JOB CLUB 5:00 - 6:00 P.M.

SOCIAL HOUR: 5:30- 6:30 P.M.
Complimentary Hors D'oeuvres served butler style. Cash Bar

DINNER

6:30 P.M.

Menu: Cream of Tomato Soup with Spinach and Pasta; Squillo Salad with Walnuts and Cranberries; Choice of either a Breast of Chicken Combination (Sautéed Breast of Chicken with fresh mushrooms & shallots with a Sherry Cream Sauce and Sautéed Breast of Chicken with Shiitake mushrooms with a Marsala Wine Sauce), Seared Salmon with a Ginger Sauce, or Fresh Vegetables with Pasta; Anna Potatoes; medley of fresh vegetables; Chocolate cake with Raspberry Sauce; a variety of breads; beverage.

Dinner reservations are required and should be received in the Section Office via **phone** (847-647-8405), **fax** (847-647-8364), **email** (chicagoacs@ameritech.net), or **online** (<http://chicagoacs.org>) by noon on Tuesday, March 14. The dinner cost is \$32 to Section members who have paid their local section dues, members' families, and visiting ACS members. The cost to non-Section members is \$34. The cost to students and employed members is \$16. Seating will be available for those who wish to attend the meeting without dinner. PLEASE HONOR YOUR RESERVATIONS. The Section must pay for all dinner orders. No-shows will be billed.

NOTICE TO ILLINOIS TEACHERS

The Chicago Section-ACS is an ISBE provider of professional development units for Illinois teachers. Teachers who register for this month's meeting will have the opportunity to earn up to 4 CPDU's.

GENERAL MEETING

7:30 P.M.

2006 PUBLIC AFFAIRS MEETING LECTURER



Dr. Harinder Singh, Howard Hughes Medical Institute Fellow and Louis Block Professor, Department of Molecular Genetics and Cell Biology, The University of Chicago

Title: "The Scientific and Ethical Landscape of Stem Cell Biology"

Abstract: Stem cell biology and regenerative medicine have recently emerged as exciting scientific and biomedical frontiers. Research in these areas has also raised significant ethical and public policy issues. The talk will cover scientific advances, promising lines of investigation and a rational framework for research support in this nascent field.

Biography: Dr. Singh is a Howard Hughes Medical Institute (HHMI) Fel-

(continued on page 2)

(continued from page 1)

low and Louis Block Professor in the Department of Molecular Genetics and Cell Biology (MG&CB) at the University of Chicago. He received the degrees of M.Sc./B.Sc. with honors in biochemistry in the college of basic sciences and humanities of Punjab Agricultural University, Ludiana, Punjab, India in 1979, followed by a Ph.D. in biochemistry, molecular biology and cell biology at Northwestern University in 1984. From 1984-1988, he was a Jane Coffin Childs Memorial Fellow for Medical Research at MIT.

Following his postdoctoral Fellowship, he joined the faculty at University of Chicago as an assistant professor in the Department of MG&CB and assistant HHMI investigator. Prof. Singh has conducted research and published many papers in the fields of MG&CB and related areas. He has 39 publications in peer-reviewed journals, as well as numerous review articles and book chapters.

REGISTER TO ATTEND MONTHLY SECTION MEETINGS

ON LINE

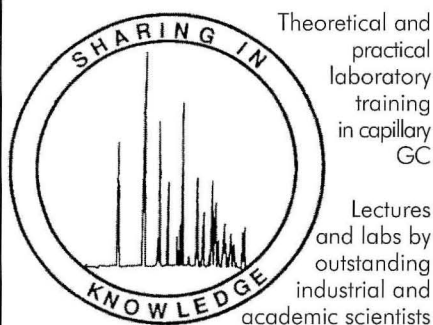
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TOPICAL GROUP SPEAKER

Dr. Irini Zanze

"Targeted Libraries--The Design and Synthesis of Novel, Potent and Selective Kinase Inhibitors"

Abstract: In recent years large diversity libraries have been replaced by more focused collections of compounds designed towards specific families of targets. At Abbott we have initiated an effort to enhance the company's collection with kinase inhibitors. This multidisciplinary collaborative effort encompasses the areas of HTS, virtual screening, NMR-based screening, x-ray crystallography, molecular modeling, high throughput organic synthesis and scaffold oriented synthesis. The presentation will describe the various approaches we have taken, with an emphasis on novelty and IP status, to produce collections of compounds that exhibit much higher hit rate against kinase targets than random collections.

Biography: Irini Zanze received her Ph.D. with Professor Nicos Petasis at the University of Southern California, in 1994. Upon completion of a short post-doc assignment with Professor Petasis, she joined Professor Koji Nakanishi's group at Columbia University for post-doctoral studies. In 1997 she joined the Medicinal Chemistry Technologies Group at Abbott Laboratories where she is currently a research investigator. Irini worked extensively on parallel synthesis and medicinal chemistry projects and on implementation of new technologies to pharmaceutical discovery. Currently, she is responsible for the Scaffold Oriented Synthesis group, which focuses on enhancing the Abbott compound collection with proprietary diverse and/or targeted scaffolds and libraries.

EVENT PLANNED FOR SENIOR CHEMISTS IN ATLANTA

If you are a retired chemist and plan to be in Atlanta, GA for the March 26-31, 2006 ACS National Meeting, be sure to attend the **Silver Circle & Retiree Breakfast on Tuesday, March 28, at the Marriott Marquis Hotel, Salon 1.** The event is at 7:30-9:00 a.m. and tickets can be purchased at registration. Program details will be announced in the Meeting Program. Ticket price is \$10.

2006 ACS NOBEL LAUREATE SIGNATURE AWARD

Congratulations to Raquel Lieberman (Ph.D. 2005) and Professor Amy C. Rosenzweig (both of Northwestern University) who received the 2006 ACS Nobel Laureate Signature Award for Graduate Education in Chemistry. The award is sponsored by Mallinckrodt Baker, Inc. The purpose of the award is to recognize an outstanding graduate student and their preceptor in the field of chemistry.

Raquel solved the first crystal structure of particulate methane monooxygenase (pMMO), an integral membrane metalloenzyme that catalyzes the oxidation of methane to methanol. Features of the structure, including the presence of copper, provide insight into how pMMO performs this extremely challenging chemistry. This research also contributes to the understanding of membrane proteins, of which very few have been structurally characterized.

This is the third year in a row the recipient has been a recent Northwestern graduate and her advisor. Previous winners of the award from Northwestern include So-Jung Park and Professor Chad Mirkin (2004) and Christy L. Haynes and Professor Richard Van Duyne (2005).

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"CHEM SHORTS" For Kids

The Elementary Education Committee of the Chicago Section ACS presents this column. They hope that it will reach young children and help increase their science literacy. Please cut it out and pass it on to your children, grandchildren, or elementary school teachers. It is hoped that teachers will incorporate some of the projects in this column into their lesson plans.

Metal Mania - Part I

Kids, do you think you could make pennies change from dull to shiny to green right before your eyes? Over the course of two months, we'll learn about metals using pennies, nails, and a few simple household ingredients to explore some of the properties of metals.

For this month you will need: 10-20 dull pennies, 1/4 cup white vinegar (dilute acetic acid, CH_3COOH), 1 teaspoon salt (sodium chloride, NaCl), a shallow, clear glass or plastic bowl (not metal), water, plastic gloves, and paper towels.

For "Shiny Clean Pennies", pour the salt and vinegar into the bowl. Stir until the salt dissolves. Dip a penny halfway into the liquid and hold it there for 10-20 seconds. Remove the penny from the liquid. What do you see? Dump the rest of the pennies into the liquid. The cleaning action will be visible for several seconds. Leave the pennies in the liquid for 5 minutes.

After the 5 minutes, take half of the pennies out of the liquid and place them on a paper towel to dry. Remove the rest of the pennies and rinse them well under running water. Place these pennies on a second paper towel to dry. Write labels on your paper towels so you will know which towel has the rinsed pennies. Allow about an hour to pass and take a look at the pennies you have placed on the paper towels. Are they different?

Pennies get dull over time because the copper in the pennies slowly reacts with moist air to form hydrated copper carbonate (which is greenish). When you place the pennies in the salt and vinegar solution, the acid from the vinegar dissolves this "patina", leaving behind shiny clean pennies. The copper from the patina stays dissolved in the liquid. You could use other acids instead of vinegar, like lemon juice. Rinsing the pennies with water stops the reaction between the salt/vinegar and the pennies. They will slowly turn dull again over time, but not quickly enough for you to watch.

On the other hand, the salt/vinegar residue on the unrinsed pennies starts another reaction between the copper and the oxygen in the air. Let the pennies dry overnight; the resulting blue-green copper substance is called "verdigris", which is one of several copper acetates (e.g. $\text{Cu}(\text{CH}_3\text{COO})_2 \cdot \text{CuO} \cdot 6\text{H}_2\text{O}$). You may even see this stain on the towel.

NOTE: Since most copper salts, including the carbonates and acetates here, are considered to be irritants, an adult partner should handle the verdigris pennies with gloves and dispose after use.

TRIVIA: Some copper carbonate minerals (CuCO_3) in nature are malachite and azurite. Copper acetate (verdigris) is used as a dye, and it can form on copper pots that are used to cook acidic foods such as tomatoes.

Keep the liquid that was used to clean the pennies stored safely until next month. We will use it in Part II to make "Copper Plated Nails".

Reference: Dr. Anne Marie Helmenstine at

<http://chemistry.about.com/cs/demonstrations/a/aa022204a.htm> and <http://www.scorecard.org/chemical/profiles/html/coppercompounds.html>

EDITED BY K. A. CARRADO, ARGONNE NATIONAL LABORATORY

All past "ChemShorts" can be found at <http://member.ship.acs.org/C/Chicago/ChmShort/kidindex.html>

WCC HIGHLIGHTS - SPRING 2006 ACS NATIONAL MEETING

WCC Activities at 2006 Spring ACS National Meeting in Atlanta, GA

- WCC Local Section Networking Lunch, Sunday, March 26, 12:00-1:30 p.m.
- Women in Industry Breakfast, Monday, March 27, 7:30-9:00 a.m.
- WCC Reception/Eli Lilly Travel Grant Poster Session, Tuesday, March 28, 11:30 am-12:00 p.m.
- WCC Luncheon, Tuesday, March 28, 12:00-1:30 p.m.
- 3rd Annual WCC Golf Classic Tournament, Wednesday, March 29, 12:00 noon

For more information about these WCC national meeting activities visit the WCC Web site at <http://member.ship.acs.org/W/WCC/>

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NATIONAL CHEMISTRY WEEK 2006

National Chemistry Week (NCW), a community-based outreach program, is designed to reach the public with positive messages about chemistry and to make a positive change in the public's impression of chemistry. Activities include chemical demonstrations, hands-on activities, lectures, open houses, displays, contests and games. NCW is celebrated annually from Sunday through Saturday during the fourth week of October. The theme this year is "Your Home - It's All Built on Chemistry". For more information visit chemistry.org/ncw. Stay tuned for information on how the Chicago Section will celebrate Chemistry Day this year!

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Chicago School Board Liaison
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Elementary Education
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Gibbs Arrangements
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Topical Group

Ad Hoc Committee Chairs

Distinguished Service Award
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Middle School/Junior High
Project SEED
State Fair
Stieglitz Lecture
Web Liason
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Willard Gibbs Jurors
Women Chemists
Young Chemists

Marilyn Kouba, Sandy Angelos
Marilyn Kouba
Marsha Phillips
Cherlyn Bradley, Charles Cannon
Fran Kravitz, Cherlyn Bradley
Jim Shoffner
Margaret S. Levenberg
Milt Levenberg
Barb Moriarty
Margaret S. Levenberg, Susan Shih
Eric Ryden, Amber Kawaoka

ALMA E-NEWS

Motivating Staff

While laboratories have long used contract workers to handle short-term workload fluctuations or to evaluate technicians prior to permanent hire, there is a growing trend to extend this practice to also include chemists' services. Some companies have gone so far as to eliminate most employees below the executive level and contract their workforce from recently emerging professional employee organizations that provide Human Resources (HR) services to multiple companies. Peter Drucker examined the roots of this phenomenon in "They're not Employees, They're People", Harvard Business Review, Feb. 2002 and attributes it in large part to the increasing web of governmental regulations that can absorb an incredible amount of company resources, expose companies or managers to lawsuits, and make employees a liability.

Of course this outsourcing strategy carries risk unless properly managed since the talents and dedication of employees determines the success or failure of the organization. Contract employment is also viewed as risky for the employee as well, but Drucker points out that affiliation with these large contract HR services may offer benefits for "knowledge workers". Typically these workers have expertise in a specialized area so that a relatively small number of positions may exist within an organization which limits advancement. By combining similar knowledge positions across several companies under one management structure, contract employee agencies can offer more opportunities.

Drucker points out that knowledge workers are the capital of the "new economy" and the manager's job is to pay attention to the productivity of capital. This means spending our time developing people, rather than on employment-related paperwork. He reminds us that "employees may be our greatest liability, but people are our greatest opportunity".

If you have any comments, cost saving suggestions, or opinions, contact me at the email address below.

Past ALMA (Analytical Laboratory Managers Association) articles by Dr. Wayne Collins, a former ALMA President, are available at the website <http://www.labmanagers.org/>. This one is from the January 2003 edition.

WAYNE COLLINS
wayne.collins@thermo.com

BIANNUAL PUBLIC AFFAIRS LECTURE ON STEM CELLS

In alternate years, the Public Affairs Committee has for the past 17 years presented a Public Affairs Lecture, alternating with the biannual Public Affairs Award. This years lecture will be on the topic of "Stem Cells" and will be presented by Dr. Harinder Singh. He is a Howard Hughes Medical Institute Investigator from the University of Chicago. (see abstract and biography).

Since Dr. James Thomson of the Wisconsin Alumni Research Foundation reported on the development of a method for culturing primate embryonic stem cells in 1998 (1, 2), there has been accelerated activity in this area all over the world. The most obvious reason that there are so many resources directed toward and invested in research on embryonic stem cells is because of the vast potential that has been forecast for their use as therapeutic agents for a variety of diseases. This vast potential for good derives from the fact that stem cells are the basic units for construction of all other cells in an organism.

The research and development in this area has not been without considerable controversy and potential conflict. It is easy to understand why. The source material is embryonic and the questions immediately arise as to how it is obtained, how it is treated and how it is used and disposed of when no longer needed. There has been much written, rules established and guidelines drafted in order to try and satisfy the many moral and ethical concerns that surround this research. Add to that the possibility for great acclaim, fame and fortune that awaits those who are successful in developing new cures and treatment methodologies, and some of the events that have taken place recently become somewhat understandable.

The stem cell issue has caught the public's attention as very few scientific issues have in recent years. There are many aspects of the science that are profoundly fascinating and interesting, beyond the potential medical and financial rewards. We are pleased that Prof. Singh has accepted our invitation to be our lecturer on this subject of such great importance and significance.

JIM SHOFFNER,
Co-Chair, Public Affairs Committee

1) James A. Thomson, Primate Embryonic Stem Cells, US 5,843,780

2) James A. Thomson and others, *Science* 282, November 6, 1998, p.1145

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WCC COLUMN

Members of the Chicago Section's Women Chemists Committee (WCC) are developing outreach plans for Chicago Area section members and the community. These plans include a column in *The Chicago Bulletin* covering topics such as networking, career development, and vignettes of women in chemistry. This month's topic is about **Susan Solomon**.

Susan Solomon, a Chicago native widely recognized as a leader in atmospheric science, is a senior scientist at the National Oceanic and Atmospheric Administration's (NOAA) Aeronomy Laboratory in Boulder, Colorado, which she joined in 1981, upon graduation from University of California, Berkeley. She is a member of the National Academy of Sciences, a foreign member of the French and European Academies of Sciences, a fellow of the American Meteorological Society and American Geophysical Union and she has received numerous awards and honors, including the National Medal of Science and the Blue Planet Prize. Her honors include the naming of the Susan Solomon Glacier in Antarctica, the coldest place on earth.

Susan grew up on Chicago's north side, in the Peterson Park neighborhood. She became interested in science, by watching the undersea adventures of Jacques Cousteau on TV, when she was less than ten years old. Susan's mother was a fourth grade teacher; her father sold insurance. Her brother is also a fourth grade teacher.

She attended Von Steuben High School. While in high school, her science fair project to measure the amount of oxygen in gas mixtures by observing the brightness of a flame was awarded first place in the Chicago Science Fair and the third place in the international science fair. As a student of chemistry at Illinois Institute of Technology (IIT) in the late 1970s, she became intrigued with the thought that chemistry could be explored on a planet instead of in the test tube. She was graduated from IIT, where work occurred on chemistry related to the atmosphere of Jupiter. She went on to graduate school at the University of California, Berkeley, specializing in atmospheric chemistry, this time on the heavily populated earth.

Susan is known for her outstanding research as the head project scientist on the identification of the causes of changes in the ozone layer on the

emergency expedition to Antarctica in 1986. The research team was sixteen scientists from four institutions. This two-month expedition made the first measurements that pointed towards chlorofluorocarbons (CFCs) as the cause of the ozone hole. Susan's insight and leadership enabled the team to detect high levels of chlorine dioxide in the stratosphere, resulting from heterogeneous reactions on polar stratospheric clouds. Susan took measurements at -40°C and 65 kilometer per hour winds. She spent several months analyzing the data. Her scientific papers provided not only key measurements, but also theoretical understanding about ozone destruction. These studies were key among the pieces of evidence, which convinced most scientists of the CFC-catalyzed ozone destruction and help to assess the risks posed by ozone depletion. Her convincing work was part of the information that led to global policy changes, global ban on CFC production and efforts to reduce CFC use.

Susan attributes mentoring to have played an important role in developing her as a scientist, as an undergraduate at IIT: Professor David Gutman; in graduate school: Harold Johnson, a leading atmospheric scientist; at the National Center for Atmospheric Research: Paul Crutzen and Raymond Noble; and at the Aeronomy Laboratory: Dan Albritton, Director.

Susan's current projects include the science working group for the Intergovernmental Panel on Climate Change. She co-chairs the working group that assesses scientific information that will directly impact its fourth report, expected in 2007. This report could, like those before it, influence global policy decisions. She states, "The role of science is not to make value judgments or policy. It's to inform people how things work". Her research continues to include climate change and ozone depletion.

While working in Antarctica, Susan became fascinated with its history and geography. For 15 years she investigated the expeditions of a British explorer, Robert Scott, who died with his team in 1912. Her studies led to *The Coldest March*, an absorbing narrative detailing how Scott's team was fatally trapped during a freak period of frigid weather, and that Scott was neither incompetent nor misguided.

Susan has commented to the question: If a young person asked you for advice as to how to become a successful atmospheric chemist, what would you say? "My best advice would be that to be successful in research, you have to be focused. You have to be able to think and absorb science exclusively

and constantly. It is difficult for young people today; they have so many distractions. If science does not motivate you enough to make you want to focus on it, then it is probably not for you."

To acquaint visitors about atmospheric science, Susan's work is featured at the Smithsonian Institution on the "Science in American Life" exhibit in Washington, DC. This exhibit enables children to learn about scientists and their work using a computer-driven display.

References

Profiles, Susan Solomon: Chemistry in Clouds, *Geotimes*, August 2004, p. 50

Blue Planet Prize, *Science*, **305**, 2 July 2004, p. 39

"Lofty Achievement: NOAA's Susan Solomon on Atmospheric Chemistry", *Science Watch*, September/October 2002, p. 3

Profile: Susan Solomon, *Global Change*, Pacific Institute for Studies in Development, Environment and Security (Oakland, California), Summer 2002, p. 16

The Bulletin Interviews Susan Solomon, *World Meteorological Organization Bulletin* 50 No.1 - January 2001

"How Susan Solomon's Research Changed our View of Earth", *R&D Magazine*, September 1992, p. 46

Roan, Sharon, *Ozone Crisis: the 15-Year Evolution of a Sudden Global Emergency*, John Wiley and Sons, New York, 1989

Supporting Online Materials

NOAA Scientist Receives Prestigious Award for Work on Ozone Hole, www.noaanews.noaa.gov/stories2004/s2249.htm

InterView with Dr. Susan Solomon, www7.nationalacademies.org/inter-views/solomon.html

www.chemheritage.org/Education-alServices/FACES/teacher/env/readings/solomon.htm

INARA BRUBAKER

The mission of the Chicago Section of the ACS is to encourage the advancement of chemical sciences and their practitioners.

IN MEMORY



Stanley Walter Drigot, a practicing chemist for fifty years, whose volunteer services on behalf of professional chemists earned him a 2001 Distinguished Service Award from the Chicago-Section, American Chemical Society (ACS), died on January 9, 2006. He was 90 years old. Stan was a native of Chicago, Illinois, born to Lithuanian immigrant parents (Stanley Sr. and Anna Shimkaitis Drigot) on November 25, 1915. He received a B.S. in Chemistry from University of Chicago in 1936 and a M.S. in Analytical Chemistry from Wayne State University, Michigan in 1947. He met and married his wife, Genevieve, in Michigan, in 1944. They returned to Chicago in 1947. Over ten years, he worked in the successive employment of A.B. Dick, Continental Can, and Borg-Warner companies, then at GTE Communications Systems Corporation from 1957 until his retirement in 1985, when he and his wife moved to Saugatuck, Michigan. Throughout his career and after retirement, Stan made significant contributions as a volunteer both to his profession and to the communities in which he lived.

- Stan's ACS colleagues noted that his sixty years of local and national committee work, especially 18 years on the Professional Relations Committee and one year as Chicago Section Chair, were "crown jewels" of his service. He introduced many Section members to the "human aspects" of the profession and inspired them to likewise become involved. This was said to be "Stan's greatest service to the Section and its future."
- During the early 1960's, when his two daughters attended Chicago public schools, he and his wife, along with other parents, were active in community support of educational quality and racial integration in the

schools and surrounding neighborhoods. He was among a group of parents who filed a successful class-action lawsuit, helping to trigger resignation of a controversial Chicago Public Schools superintendent regarding these matters (1963). He was recognized by the Chicago Public Schools for 25 years service as a science fair judge. He was featured in a Saturday Evening Post article (Jan 25, 1964) representing 1,500 healthy American male volunteers in a national study confirming the link between cholesterol and heart health.

- In Saugatuck, he was a valued volunteer with the Kalamazoo River Protection Association and for many years served as Chair of the Allegan County Local Emergency Protection Committee.
- Throughout his life, Stan impressed many by his tireless public service, his kind and gentle nature, and his ability to lead quietly by example.
- In addition to his wife Genevieve, he is survived by two daughters, Karen Stone and Diane Drigot, one grandson, a niece, and three nephews.
- A service in celebration of his life will be held at 10 a.m. on April 1 in Bond Chapel, 1050 E. 59th St., Chicago. Condolences may be sent to the family via his wife, Genevieve Drigot, Box 661, Saugatuck, MI 49453. The family wishes any contributions in Stan's memory be sent to the "Marie Ann Lishka Memorial Scholarship," Chicago Section ACS, 7173 N. Austin Ave., Niles, IL 60714, an annual award to a promising Chicago area female high school chemistry student.

CHEMISTS CELEBRATE EARTH DAY

Chemists Celebrate Earth Day is an environmental awareness campaign. The event provides activities that are designed to enhance public awareness of important contributions made through chemistry in preserving our planet and improving our environment. The event is held annually on April 22. This year the theme is "Dig it!". For more information visit chemistry.org/earthday.

JOB CLUB

The next meeting of the **Chicago Section ACS Job Club** will be held on **Friday, March 17 at 5:00 p.m. at Café La Cave**. The meeting will include a review and discussion of some of the tools that a chemist can use to conduct a job search.

The Job Club provides a continuing opportunity for unemployed members of the Section to meet with one another, share their experiences and develop a network that may help in identifying employment opportunities. Bring plenty of resumes and business cards to distribute to your colleagues. Be prepared to talk about what kind of job you are seeking.

Several participants have received outsource help with resume preparation and marketing strategies to present their best attributes to prospective employers. The group has critiqued some individual resumes and made suggestions for improvements in a positive way!

The Job Club is also for employers seeking chemists. Employers need to be prepared to describe the positions to be filled and requirements for these positions.

Should you wish to attend the Section's dinner meeting following the Job Club, the cost is \$16 and you can continue your networking activities. Please call the Section office for reservations and indicate that you are eligible for a discount.

Also, the Chicago Section's website has a link to the Job Club's yahoo job forum group. If you can't attend the Job Club, you can still find out about job openings and other information.

FREE T-SHIRTS

The Hospitality Committee raffles one T-shirt at each monthly dinner meeting. The shirt has **CHICAGO** spelled out using the periodic table. So come to a monthly meeting and maybe you'll win one!

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CLIMATE CHANGE FORUMS

The Adler Planetarium and Astronomy Museum is presenting a series of public forums throughout the metropolitan Chicago area that brings together a coalition of informal learning institutions, universities, corporations and professional groups to create a continuing community dialogue about the prospects for climate change including historical evidence, magnitude, policy implications and remediation. The Chicago Section of the American Chemical Society is part of this coalition. Current public debate illustrates the need for informed citizens to understand the scientific data and models that underlie estimates and predictions for humanities effect on our planet.

Funded by NASA's Earth Explorers Institute, these forums bring leading scientists, policy makers, and interested citizens together to explore the issues surrounding global climate change.

Forum 2: "Is Earth's Ozone Shield Recovering?"

The Field Museum

March 25, 2006 - Time: 10am - 12pm

From observations to theory to data collection to smoking-gun proof to international policy, the story of the Antarctic ozone hole has all the makings of a drama with a happy ending, right? No so fast! Despite ongoing expectations that the ozone hole will recover, we have yet to see evidence that a recovery is underway. Why was so much ozone lost so fast? Why hasn't it recovered? What is the status of the ozone hole today? What are the chemicals that destroy stratospheric ozone, where do they come from, and what exactly makes them so destructive to our health? Will the ozone shield ever recover and, if so, when?

Guest Speakers Include: Dr. Paul A. Newman - NASA Goodard Space Flight Center, Dr. Stephen Anderson - Environmental Protection Agency, Dr. Drusilla Hufford - Environmental Protection Agency

Forum 3: "Human Footprints: The Impact of Science, Policy and Technology on Climate Change"

Northwestern University - Chicago Campus

April 22, 2006 Time: 10am - 12pm

Forum three will explore how humans impact our planet and its resources, how microclimates affect the causes and transmission of disease and therefore what consequences we face as a society. Discover how satellite data and modeling techniques are helping to determine

society, domestic and international policy responses to the issues we face regarding our long-term energy commitments.

Guest Speakers include: Dr. Michael Schlesinger - University of Illinois at Urbana-Champaign

Forum 4: "How Can We Continue to Meet Our Energy Needs without Jeopardizing our Future"

Chicago Cultural Center

June 3, 2006 Time: 10am - 12pm

Forum four will explore energy issues we currently face and potential remedies to reduce emissions over the next century. The Director of Argonne National Laboratory, Bob Rosner, will discuss solutions to the problem and how Argonne is moving towards cleaner energy production. Also hear from Former CIA Director James Woosley, how climate change affects issues of national security, and from world-renowned architect William McDonough, how the future of architecture and "green building" can lead to more energy efficient designs.

Guest Speakers Include: Bob Rosner - Director of Argonne National Laboratory

CONTACT THE CHAIR

Do you have any questions, suggestions, recommendations, ideas, gripes, complaints, or pet peeves relating to the Chicago Section? Do you want to volunteer, help out, or lend a hand with Section programs or activities? Then contact your Chair. Simply log onto the Section's Web Page at <http://chicago.acs.org>, find the green button "Contact the Chair", and send me an e-mail. If I can answer your query I will respond personally. If I can't I will forward your e-mail to someone who can, or try to provide you with a contact — all in a timely manner. The Section belongs to you and the other 4,800 ACS members who reside in the Chicago area (northeast Illinois and northwest Indiana). Only you can make it work for you by being involved. But you can also make it fail by not being involved. I look forward to hearing from you.

BARBARA MORIARTY
CHICAGO SECTION CHAIR

ARE YOU UNEMPLOYED?

Are you seeking a better job? Are you looking to improve your career? The place to start is with your resume. That is the single tool that will get you an interview, illustrate your professional strengths, and show how you can improve your importance to your employer.

You can get help improving your resume through the Career Consultants. These are volunteers trained by the American Chemical Society to assist its members with writing resumes, contacting prospective employers, and providing tips on interviews.

There are several Career Consultants in the Chicago Section who are willing to meet with you and help improve your resume. **Simply call the Section office at 847-647-8405 and set up an appointment. Fifteen to thirty-minute sessions will be arranged at our monthly meetings.** Should you require more time arrangements can be made with your consultant to continue discussions by telephone, by e-mail or by additional face-to-face sessions. **You also can attend the Section's Job Club where you can network with other people having similar concerns.**

We are here to help. All you need to do is pick up the telephone and bring copies of your resume to the next monthly meeting.

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ACS CHEMISTRY ENTERPRISE 2015 REPORT

Looking ahead a decade, experts predict strong growth, expanding markets and increased capacity for the chemistry enterprise.

This vision for the future is contained in "The Chemistry Enterprise 2015," a report recently issued by the American Chemical Society, the world's largest scientific society. Throughout 2005, then ACS President William F. Carroll, Jr., led a Society-wide effort to anticipate how chemistry will change by 2015. The focus was on education, industry and government.

The objective was to gather information about what the 2015 landscape will look like, so chemical scientists might better prepare for those changes and take appropriate action. The full report, which is based on a year-long series of discussions and symposia, is available at: <http://chemistry.org/chemistryenterprise2015.html>

Following are highlights of the report:

Multidisciplinary Activity — Multidisciplinary research will be increasingly common in the next 10 years. Ultimately, it often will be difficult to identify a project's disciplinary origin. Strength in basic chemistry, however, still will be essential to advances in all of molecular science, and chemists will need to be carefully trained in the science and able to communicate with other related disciplines.

Globalization — A greater fraction of chemical manufacturing will take place in Asia, but investment returns from the global enterprise will flow back to the United States. As the standard of living increases in Asia, labor costs will rise and salaries will rise most rapidly for the best and the brightest scientists. This will decrease, but not eliminate, the pressure for U.S. companies to shift activities offshore.

Energy and Raw Materials — By 2015, at least one new nuclear power facility will be built in the United States; China will have a significant investment in nuclear energy, which will create more jobs for chemists and other scientists.

Research and Innovation — By 2015, barring new emergencies, the research portfolio will include a return to more long-term research. Funding will remain the major challenge for research and development. Chemistry is unlikely to abandon the single-investigator model,

but multidisciplinary and the expense of research will drive many individual investigators toward collaborative work at centers where they can obtain access to expensive yet essential infrastructure.

Education and Institutional Structure

— By 2015, university faculties will be more representative of the U.S. population in terms of gender and ethnicity. Graduate-student enrollment will lead to greater use of undergraduate teaching assistants and peer-led teaching. In some cases the number and duration of lower-level laboratory classes may be reduced.

Workforce — There will be increased representation at all levels for women and minorities on both technical and managerial tracks. Chemists will still work primarily in industry, although perhaps in smaller companies and in a wider variety of careers rather than just in the field of chemistry.

Government Research Funding

Investment in science, technology and education will need to compete with spending on national security and social programs. To maintain strong support for science, chemists must show the value that science and educated practitioners can provide and demonstrate that federal research dollars are a strong economic investment.

SECTION SPEAKERS' BUREAU

The Section is trying to rejuvenate its Speakers' Bureau. We have had some individuals volunteer to speak at schools, service organizations etc and a few requests for speakers or demonstrators. We are in need of someone willing to take responsibility for compiling a list of volunteer speakers and topics and for getting this information out to area schools, libraries and service organizations. One person has volunteered to help organize this but cannot take on the project without assistance. If you can possibly fit this task into your busy schedule, please call or e-mail the Section office. If you cannot do this but are interested in speaking, please also let us know.

SUSAN SHIH, CO-CHAIR
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CALL FOR WCC OVERCOMING CHALLENGES AWARD NOMINATIONS

The Overcoming Challenges Award (OCA) acknowledges the efforts of women and undergraduates who have overcome economic, personal, and/or academic hardships in pursuit of an education in the chemical sciences. The award consists of a plaque, a \$250 honorarium, and \$1,000 for travel expenses to the fall ACS National Meeting where the award is presented. Award candidates must be women matriculating as an undergraduate chemical science major/minor in a two-year program or at a four-year school not granting a doctoral degree in chemical-related disciplines.

Nominations are due May 1, 2006, and should be sent to: Women Chemists Committee, American Chemical Society, 1155 16th Street, N.W., Washington, DC 20036. For additional information, contact the WCC at wcc@acs.org or visit <http://membership.acs.org/WWCC>.



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ANALYSIS FOR THE CHEMICAL ELEMENTS

SCIENCE HISTORY TOUR 2006

Our theme for the 2006 summer tour will be "The Age of the Earth and the Evolution of Life". It will start in the north of the UK on July 12 in Durham and end in Edinburgh, Scotland on July 26. We will get as far north as the Orkney Isles, visiting other places of interest such as Fort William, Inverness, Leeds, Aberdeen, and St. Andrews.

Tour cost will include hotel accommodation with private bathrooms, admissions to museums, lecture fees, and taxes along with land transportation. Breakfasts and at least (on average) one other meal per day and usually wine with dinners are also included. The cost of the 2006 tour is \$2,975 per person double occupancy. TRANSATLANTIC AIRFARE IS NOT INCLUDED. Inexpensive graduate credit is available and free CPDUs for teachers.

FOR SIGN-UP MATERIALS Contact Jaci Gentile E-mail: jgentile@wideopenwest.com

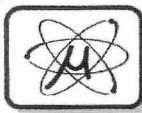
FOR FURTHER INFORMATION go to <http://www.chem.uic.edu/marek/>

FOR ANSWERS TO QUERIES and/or to be put on the mailing list, contact:

Yvonne Twomey E-mail: ytwomey@mindspring.com or Lee Marek, Tel: 630-420-7516 E-mail: LMarek@aol.com, Lmarek2@uic.edu

WEB PRESENTATION of past trips: <http://www.chem.uic.edu/marek/>

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SECOND CAREER CHEMICAL EDUCATION SCHOLARSHIPS AVAILABLE

Attention Persons Interested in Becoming Second Career Chemistry Teachers

The Hach Scientific Foundation would like to offer second career chemical education scholarships to chemists. Scholarship money is available for second career chemistry teachers! The Hach Scientific Foundation is a private multi-million dollar foundation dedicated to chemistry and chemical education. The Hach Scientific Foundation is providing scholarships across the country to chemists interested in pursuing a Masters in education and teachers certificate. For more information, visit: <http://www.hachscientificfoundation.org/teachers.shtml>

YOUNGER CHEMISTS COMMITTEE NEWSLETTER

News Flash: The YCC Newsletter Has Gone Electronic!

The ACS National YCC newsletter will only be sent electronically. Sign up for our e-mail notification system! It's easy-just visit our Web site and follow the signup link! Even if you choose not to receive our e-mails, you can always read the newsletter on our Web site, chemistry.org/ycc
See you on the Internet!

DEADLINES FOR CHEMICAL BULLETIN

Please submit all Chemical Bulletin copy to the editor before the deadlines listed below for each issue. Articles can be emailed to the editor, Cherlyn Bradley, cbrad1027@aol.com.

Since we like the Bulletin to be as timely as possible, we need the lead time indicated. You can help by early planning and submission of your information or articles.

2006 Issue	Deadline
May	March 24
June	April 28
September	August 4
October	August 25
November	September 22
December	October 13

TEAMWORKS 2006
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CALENDAR

March 12-16, 2006: PittCon 2006, Orange County Convention Center, Orlando, FL. For further information, go to www.pittcon.org or call (412) 825-3220.

March 17, 2006: Chicago Section's Public Affairs Dinner Meeting at the Café La Cave. Dr. Harinder Singh, Louis Block Professor and Investigator, Howard Hughes Medical Institute of Department of Molecular Genetics and Cell Biology, University of Chicago, will give the Public Affairs Lecture on the various issues that surround the science and technology of stem cells.

March 24, 2006: ALMA Chicagoland Meeting will be held at UOP in Des Plaines, IL starting at 11:30 a.m. and concluding by 4 p.m. The topic will be: "BRING YOUR PROBLEMS TO ALMA." At this meeting, please be prepared to discuss 3 problems with your colleagues. For further information, contact Dave McDonald (847-970 5262, dmcDonald@usg.com).

March 25, 2006: The second Climate Change Forum, "Is Earth's Ozone Shield Recovering?", Field Museum, 10 am to noon. **See article in this issue.**

March 26-30, 2006: The 231st ACS National Meeting, Atlanta, GA.

March 29, 2006: Teamworks 2006 Tradeshow and Exhibition sponsored by the Society of Cosmetic Chemists, Donald E. Stephens Convention Center, Rosemont, IL. Free admission. Register online at midwestscc.org or use the enclosed form.

April 10-13, 2006: 43rd annual Introductory Course in Gas Chromatography sponsored by the Chicago Chromatography Discussion Group, Roosevelt University, Schaumburg, IL. Call (847) 647-0157 for an application. **See ad in this issue.**

April 22, 2006: The third Climate Change Forum, "Human Footprints: The Impact of Science, Policy and Technology on Climate Change", Northwestern University-Chicago Campus, 10 am to noon. **See article in this issue.**

April 28, 2006: The Distinguished Service Award will be presented at the Chicago Section Meeting. Note that this is a LUNCH meeting.

May 13-18, 2006: American Industrial Hygiene Conference and Exposition, Chicago. For more information, go to <http://www.aiha.org>.

May 19, 2006: Chicago Section's Willard Gibbs Award Banquet Meeting.

May 31-June 2, 2006: The Great Lakes Regional Meeting, Hyatt Regency Hotel, Milwaukee, WI. The theme is "A Festival of Chemistry in the City of Festivals".

Do you know the current whereabouts of long-time Seciton member JEWEL NICHOLLS? We know that she moved to Minnesota, and then to Arizona several years ago, but have lost track of her. If you have information on Jewel, please contact the Section office at 847-657.8405.

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