Spring-Summer 2009

Women Chemists

To Be Leaders in Attracting, Developing, & Promoting Women in the Chemical Sciences and Related Disciplines

American Chemical Society
Women Chemists Committee
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Washington, DC 20036
http://membership.acs.org/W/WCC

What's Inside This Issue?

Chair's Comment

Hello and welcome to another edition of the Women Chemists Committee (WCC) newsletter!

In my spring 2009 column, I shared the news of the 20th anniversary celebration of the WCC/Eli Lilly Travel Award program. Started in 1989 by Christina B. Erwin, a past WCC chair, the program has provided travel grants to more than 500 female students. The WCC is grateful for the continuous support by the Lilly Research Laboratories at Eli Lilly and Company during this period. We believe it is essential to enable women in the early years of their career to attend and present technical results at scientific meetings. The WCC/Eli Lilly Travel Award program provides grants to female students (undergraduate, graduate, and postdoctoral) to present the results of their research for the first time at a major scientific meeting within the United States. Grants typically range from $500–800 and cover recipients' registration, travel, and accommodations.

The impact of receiving a travel grant from Eli Lilly and Company has helped increase the number of women in chemistry by providing:
i. Scientific Education
ii. Improved Communication Skills & Confidence
iii. Increased Motivation & Commitment to Science
iv. Interaction with other Scientists/Network
v. Feedback/Suggestions for Research
vi. Contacts for Future Employment/Positions
vii. Career Development

To celebrate the 20th anniversary, the WCC will host a Travel Award Alumni Coffee Hour at the upcoming 238th ACS National Meeting in Washington, DC. We invite all former travel awardees to this event to help us celebrate! The Coffee Hour will be a wonderful opportunity to meet and network with other former awardees. It will be held Tuesday, August 18 at 10:00 a.m., in the Willard Hotel. We ask that you RSVP to the Travel Award Coffee Hour at wcc@acs.org.

We hope all ACS members will join us at the WCC/Eli Lilly Poster Session & Reception afterwards at 11:00 a.m., in the Willard Hotel where the fall 2009 travel awardees will present posters. The popular WCC Luncheon will follow at 12:00 p.m., in the Willard where these awardees will be recognized; luncheon tickets are available through meeting registration.

I would like to share some other exciting activities that the WCC will host in 2009. We will provide great networking opportunities and speakers at the WCC Open Meeting, the Women in Industry Breakfast, and the WCC Luncheon. Look for details within this issue on the Invention to Venture Workshop in Washington, DC. We continue to strengthen our formal partnership with other ACS committees whose focus is diversity, so that we can combine resources when appropriate.

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Chair's Comment

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Do not miss the jointly sponsored "Chemistry, Sustainability, and Diversity: Global Imperatives" symposium on Monday, August 17, from 9:00 to 11:30 a.m., which will explore the business case for diversity. We are also putting considerable effort into outstanding regional and local programming, while administering academic lectureships and select scholarship programs.

Consisting primarily of volunteers, the ACS and its committees function by members for members, like you. Each of us, as individuals, is a piece of the solution. I welcome your ideas and suggestions.

—Dawn Brooks, 2009 WCC Chair

2009 Garvan-Olin Medal Symposium

The Women Chemists Committee honored the recipient of the 2009 Francis P. Garvan-John M. Olin Medal, Professor Kathlyn Parker from Stony Brook University, through co-sponsorship of the award symposium with the ACS Division of Organic Chemistry. The symposium was held on Sunday, March 22, 2009, at the 237th ACS National Meeting in Salt Lake City. Speakers included friends and colleagues of Professor Parker. Following introductory remarks by Donna Huryn, Adjunct Professor of Chemistry at the University of Pennsylvania, Professor Nicole Sampson, Stony Brook University, discussed "Romping with Cyclobutanes: From Fertilization to Antibacterials". Professor Richmond Sarpong, UC Berkeley, presented his research on the strategies and tactics inspired by seven-membered rings in natural products, including the synthesis of cyanthiwigin G or F, cortistatin A, and lyconadin A. Jeffrey Schwartz, Princeton University, highlighted surface chemistry you may need someday and his PI grant from the National Football League for research on sports injuries. Nobel Prize winner K. Barry Sharpless, The Scripps Research Institute, shared his thoughts on modular synthesis for function. The award address from Professor Parker highlighted her synthetic work on SNF4435C, morphine, and the immunosuppressant, (+)-discodermolide.

—Dawn Brooks

2009 Award in Organometallic Chemistry Symposium

The WCC was honored to cosponsor the award symposium for the 2009 recipient of the ACS Award in Organometallic Chemistry with cosponsorship from the ACS Division of Inorganic Chemistry. This year's honoree was Odile Eisenstein of the Université Montpellier 2, France. When asked about receiving the award, Dr. Eisenstein stated, "I am so honored to be given this prestigious award." In addition, when asked about being one of the few women to receive this award, she stated that she was very grateful. Most of the speakers were former students of Dr. Eisenstein. Among the talks given topics included mercury detoxification; platinum-substituted thiophene complexes; how lanthanide metals can be used in organometallic complexes; and, how asymmetric catalysis could be used to generate some fantastic yields.

—Novella Bridges

Town Hall Meeting Hosted by the ACS Division of Professional Relations

This session was held on Tuesday morning from 10:00 a.m. to 12:00 p.m., in the Little America Hotel at the Spring ACS National Meeting. The event, which included a much-acclaimed light lunch, drew approximately 23 people including ACS Past President Bill Carroll, some board members, and several councilors. The meeting focused almost entirely on the town hall-style discussion of the role ACS should play in assisting chemists who have lost jobs in the current economy. Suggestions included: encouraging industries to maintain basic research for long-term success; looking at ways to encourage and support small companies and entrepreneurial efforts of individual and small groups; and, making the career counseling programs of the ACS more visible. Many chemists seemed unaware of these programs. Concern was expressed about mergers in the chemical industry and their effect on the number of research positions. A second concern was that mergers might lead to chemical companies that are "too big to fail". The group found the experience valuable and PROF plans to hold another town hall meeting at the Washington, DC meeting.

—Daniel Libby

2009 Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences

Mark J. Cardillo, Shirley McBay, ACS President Tom Lane *(left to right)*

Photo courtesy of Jeannette Brown

The 2009 recipient of the ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences was Dr. Shirley McBay. The award symposium was sponsored by ACS Division of Environmental Chemistry and cosponsored by WCC, the Committee on Minority Affairs, and the Committee on Project SEED.

The citation on Dr. McBay's award reads, "For the tremendous support and encouragement she has provided to minority students who are pursuing careers in science and engineering". This is an understatement of the work that Dr. McBay does to see that all students get a quality education. She is the founder of Quality Education for Minorities (QEM), http://www.qem.org/. "The QEM Network is a non-profit organization based in Washington, DC, dedicated to improving the education of African Americans, Alaska Natives, American Indians, Mexican Americans, and Puerto Ricans. Millions of dollars, now spent for remedial purposes, could be made available for the educational benefit of all children and youth by improving the quality of education available to the groups targeted by QEM. Quality education for minorities improves the quality of education for all." This is the reason she founded the organization and why she works tirelessly to fulfill its commitments.

Her award talk at the ACS meeting was held in the Division of Environmental Chemistry. Unfortunately, it was the last talk of the day and many of the members of the division were not present. However, Dr. McBay posted the entire talk on her website and I hope that division members will read it as it contains action items for the ACS and, specifically, its environmental chemists. The title of the talk was "Environmental Justice: A Leadership Role for Environmental Chemists" and can be found at http://www.qem.org/ACSenvironmentaljusticetalk-mcbay.pdf.

Dr. McBay began her talk by relating the environment to the work she does with minorities by saying, "Although issues related to environmental hazards have arisen during our work with Historically Black Colleges and Universities, it was a project undertaken three summers ago on hazard waste dumps located on or near tribal lands by one of our interns from a tribal college that heightened our staff's awareness and concern about Environmental Justice. It was the work of this student that made clear the impact on the well-being of tribal communities of the lack of forethought regarding the locations of such dumps and the lack of sustained monitoring once these sites were selected." She then went on to say, "Residents of high-poverty neighborhoods are disproportionately exposed to environmental hazards that adversely affect their health and quality of life. Overexposure to toxic environments such as asbestos, lead, mold, arsenic in drinking water, power plants, and toxic waste dumps pose significant health risks that disproportionately affect communities of color and the poor. The persistent disparity in the health status of racial and ethnic populations when compared with the overall health status of the U.S. population is evident."

She then gave the definition of Environmental Justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies".

After speaking about the laws and regulations and background information about Environmental Justice, she presented a four-step plan for "environmental" chemists to follow:

STEP I. INCREASING AWARENESS OF THE ISSUES. This means answering such questions as: What are the benefits and risks associated with environmental science applications and related technologies? Do the benefits outweigh the risks? What policies are needed to ensure equity? How can our answers protect society/our communities and, at the same time, enable science to move forward and provide life-enhancing discoveries? In addition, very importantly, who should be involved in making these decisions?

STEP II. IDENTIFYING THE CHALLENGES. This step is essential to developing a comprehensive plan of action. However, such a plan also must be based on the progress that is being made. The challenges involve recognizing the environmental realities facing low-income and minority communities.

STEP III. DEVELOPING A PLAN OF ACTION. This step entails designing a multipronged effort at the community, state, and national levels to bring about the needed changes in environmental policies and practices. Such a plan should be based on research, on policy, and on community outreach.

STEP IV. BUILDING CAPACITY. Clearly, a group such as the ACS Division of Environmental Chemistry can further the development of a comprehensive plan to achieve Environmental Justice. For example, the Division could advocate for an Environmental Justice Corps comparable to the Peace Corps that would, after initial training, be dispersed within the United States to various low-income and minority communities where some of the hazardous waste sites exist.

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2009 Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences

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However, Dr. McBay did not finish there. She laid out specific action plans for chemists who lived in certain states to follow. For this, I refer you to her paper cited above.

She ended by going back to her mentoring of minorities by saying that:

- "Your expertise and leadership are sorely needed to enhance the quality of training for those entering the environmental workforce and to help educate a more environmentally literate, culturally competent, diverse pool of students. The QEM Network can help to identify campus contacts, if you choose to work with colleges and universities."
- "Your expertise and leadership are needed to help empower low-income and minority communities through education, increased awareness, and the identification of self-help strategies."

She wanted all of us to accept this challenge!

Dr. McBay is one of the pioneer African American women chemists whom I am studying for my book. She was born in Bainbridge, Georgia. She was an excellent student and started college while still a teenager so that she graduated from Paine College, an historical Black College, at the age of 20. She became an instructor at Spelman College in Atlanta while studying at Atlanta University for two Master's degrees, one in chemistry, and one in mathematics, which became the subject she loved most as she received a Ph.D. in mathematics from the University of Georgia. She returned to Spelman College to become an associate professor of mathematics and eventual chair of the Mathematics Department. Here began her life-long career of promoting minorities in science as she began to question the low production of science graduates at Spelman and the perceived low status of science at the college. She was instrumental in creating the Division of Natural Science at the college and eventually became the chair of that division. This post launched her career, which led to positions at the National Science Foundation and MIT and eventually the founding of QEM.

Dr. McBay was married to Henry McBay, who is known as the "father" of most pioneer African American Ph.D.'s in science. He was not only her husband, but also her early mentor. For more information about Dr. McBay, I refer you to the article in *African American National Biography*[1] and the one still to be written in my book.

—Jeannette Brown

[1]Scriven, O.A. Shirley Mathis McBay. In *African American National Biography*; Gates, Jr., H.J., Higginbotham, E.B., Eds.; Oxford University Press: New York, 2008; Vol. 5, pp 461-463.

From Invention to Venture: Women and Technology Entrepreneurship

Date: Sunday, August 16, 2009, 1:00–5:00 p.m.
Location: ACS National Meeting, Washington, DC–Walter E. Washington Convention Center

The American Chemical Society's Women Chemists Committee and the National Collegiate Inventors and Innovators Alliance invite you to attend an afternoon workshop focused on the key challenges facing women as they start up new ventures or license or otherwise transfer technology. Sessions will include panel discussions and feature the opportunity for entrepreneurs to "speed pitch" to VIPs and speakers.

WHO SHOULD ATTEND THIS WORKSHOP?
Any woman chemist or scientist, student, or scientific professional, in academia, industry, or government who wants to create her own path and gain the insights and skills it takes to be successful in competitively representing her innovation–from the perspective of being both a woman and an innovator!

WHAT YOU WILL GAIN BY COMING?
Skills, insights, and networking! Whether it is building a venture team or raising financing, being a woman entrepreneur has its advantages, and its challenges. This workshop is designed to give women insights on the key issues for successful technology venturing and the practical skills and tactics to address the issues so they expertly navigate the commercial realm and build high-growth ventures and lifestyle businesses alike.

In addition, you will have an opportunity to pitch your idea to experts during the Speed Pitch session. For further details, see http://www.invention2venture.org/wcc09/agenda/.

COST: ACS Member: $40
All Students: $20
Non-ACS Faculty: $40
All Others: $80
To participate in the additional speed-pitch session: $25/Team for 15 minutes

NCIIA

Girl Scouts Make Great Forensic Scientists

When young girls participate in a chemistry program and make comments that include, “I learned I can be pretty and smart”, “I learned I can do science”, and “I want to go to college here”, the program can be considered a success. These were just some of the positive statements received after a pilot workshop that took place on April 18, 2009, at Central Michigan University (CMU) organized by the ACS Midland Section in partnership with the CMU ACS Student Chapter and Girl Scouts Heart of Michigan (GSHOM).

Forty Girl Scouts, grade levels four to six, from across mid-Michigan, traveled to Mount Pleasant where the girls could experience a college campus laboratory and act as forensic investigators for this all-day Saturday workshop. They used clues to individually complete a series of hands-on chemistry experiments and solve a mystery called “The Case of the Unsigned Letter”.

To solve the mystery, participants were introduced to the “crime scene” where a note had been left from a relative at a family reunion. The letter is unsigned, but promises a gift. The girls needed to determine who left the note from a group of potential suspects, Aunt Io Dine, Aunt Ruth Enium, Uncle Ben Zene, and Uncle Al D. Hyde (characters played by members of the CMU ACS Student Chapter) in order to receive their gift. Clues included ink samples from the letter, soil samples taken from a dirty footprint nearby, a sticky substance on the letter, and a white powder on the desk next to the note. The participants kept track of their data in laboratory notebooks, and each Girl Scout could perform her own analysis of the clues using paper chromatography, viscosity, and chemical reactions in order to compare samples from the crime scene to samples from the suspects.

In the laboratory, ACS Student Chapter volunteers gave the Girl Scouts direction and discussed lab safety, performed demos to reinforce the scientific concepts, and assisted the girls with their experiments. In the lecture hall, the Girl Scouts interacted with a guest speaker, Dr. Janet Miller, who gave a talk about additional types of forensic evidence including DNA. She closed the case by discussing results from the final clue as the DNA analysis of saliva from the envelope. She also discussed notable women scientists and had a dialogue with the girls about other science career opportunities. Dr. Miller, a research scientist in the Biology Department of CMU, is also the DNA sequencing and analysis coordinator there and was a perfect fit as a positive female role model for this program.

The busy day also included lunch in a campus dining hall. Liquid nitrogen ice cream and demos provided by the CMU ACS Student Chapter ended the day. Girl Scouts received a chemistry participation patch, a “Camp Chemistry” T-shirt, a gift bag with ACS newspapers, giveaways, and CMU admissions promotions. As an additional Earth Day bonus, girls who brought either batteries or old tennis shoes to recycle received an Earth Day patch.

This workshop was based upon the Magic of Chemistry™ Program developed by Dr. Sheryl Tucker at the University of Missouri (MU). Dr. Tucker, who is currently an associate dean to the graduate school at MU, has been biannually offering a rotation of three different workshops to Girl Scouts Heart of Missouri for over a decade. She has generously shared her program with the Midland Section, and “The Case of the Unsigned Letter” represents our local pilot of one of the workshops from her program.

The Midland Section recently received a $2,500 Innovative Project Grant from ACS. This award will fund starting materials to expand and continue similar workshops and put together mobile kits so that such workshops can be repeated easily. Plans are underway with the Girl Scouts Heart of Michigan to offer another workshop to middle school-aged girls in the fall called “Camp Chemistry: Color!” This workshop again is based on Dr. Tucker’s successful program in which participants will explore colorimetric-themed chemistry. Experimental rotations will include chromatography of M&M candy coatings, pH “color charting” using a red cabbage indicator, secret writing using gold indicator paper, and a lesson on fiber-reactive dyes while tie-dyeing T-shirts.

The goal is to keep young girls interested in science by providing a fun inquiry-based learning experience in which each child can individually participate. The Kids & Chemistry Committee of the Midland Section hopes to create a sustainable program in their partnership with the Girl Scouts and through the combination of a college campus experience, the relevant explorations of chemistry and how it affects our daily lives, and the positive interaction with the volunteers. The foundation of such programming will allow us to continue to expand our outreach to other groups as well.

Special thanks go out to ACS President, Dr. Tom Lane, and the Dow Corning Foundation for sponsorship of the pilot of “Camp Chemistry” and to John Blizzard, Midland Section Chair-Elect, for enabling the purchase of program T-shirts. This program was also made possible by the hard work of volunteers from CMU, especially Jason Mann, ACS Student Chapter President, and Sharyl Majorski, ACS Student Chapter Advisor and Chemistry Lab Coordinator, as well as Rachel Sherwood and Jean Holland from the GSHOM Saginaw Regional Office.

If interested in learning more, please contact Lisa Thackery at Lisa.Thackery@dowcorning.com.

—Lisa Thackery

2009 Award for Encouraging Women into Careers in the Chemical Sciences

At the Spring ACS National Meeting in Salt Lake City, a well-attended Women Chemists Symposium took place on March 24, 2009, in honor of Mary F. Singleton, recipient of the national ACS Award for Encouraging Women into Careers in the Chemical Sciences. This successful WCC symposium was cosponsored by the History of Chemistry Division (HIST), the Committee on Economic and Professional Affairs, and the Division of Professional Relations and organized by Janet Bryant, Amber Hinkle, Deborah McCarthy, and Marinda Li Wu.

Mary Singleton, now retired from Lawrence Livermore National Laboratory and residing in New Mexico, helped reinitiate and organize a Women Chemists Committee (WCC) for the ACS California Section in 1989. Over a decade earlier, Attila Pavlath, Past Chair of the ACS California Section and ACS Past President, had the vision to encourage women chemists to form a WCC. However, back in 1978, the number of women chemists was too few to sustain a successful WCC. This year, it is wonderful to celebrate the 20th anniversary of an active local WCC that has contributed to many public outreach programs and educational activities for the California Section such as Expanding Your Horizons, Girls Go Tech for Girl Scouts, Science Cafes, and others.

The WCC-HIST symposium honoring Mary Singleton began with past Priestley medalist, Professor Darleane Hoffman from Lawrence Berkeley National Lab, describing "Progress for Women in Careers in the Chemical Sciences over the Last 60 Years". Nora Briant, who worked for years with Mary Singleton at Lawrence Livermore National Lab, spoke on "Cultivating Diversity in Science and Engineering". Dr. Barbara Low from Columbia University gave an inspiring talk on her early research on "Determination of the 3-D Structure of Penicillin". Marinda Wu then followed with a presentation coauthored by past CA-WCC Chair, Dr. Elaine Yamaguchi, on "How to Start and Grow a Successful Local WCC" (posted on www.calacs.org). Professor Deborah McCarthy from Saint Mary's College in Notre Dame, Indiana gave an overview on "Women's Colleges and Women Chemists". The symposium concluded with Mary Singleton delivering a wonderful award address on "Lessons Learned from a Career in the Chemical Sciences".

It is quite fitting that Mary Singleton received the national ACS Award for Encouraging Women into Careers in the Chemical Sciences on the 20th anniversary of the active local WCC that she helped start for the California Section in 1989.

—Marinda Li Wu

Nora Briant, Mary Singleton, Deborah McCarthy, Darleane Hoffman, Marinda Wu, and Barbara Low *(left to right)*

Photo courtesy of Janet Bryant

Women in Industry Breakfast

The Women in Industry Breakfast in Salt Lake City was filled to capacity, as is always the case. A total of 54 students and 66 professional chemists purchased tickets. Of the professional attendees, approximately half identified themselves as being from industry; the remaining professionals identified themselves as being from academia, government, private consulting, etc. The breakfast provided a venue for informal networking before and during the meal, followed by an organized networking activity designed to facilitate conversation between students and professional chemists.

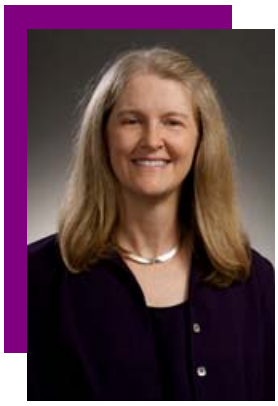
Students commented that they were very grateful to the professionals for providing a personal perspective on the role of a chemist in industry, academia, government, or other career. Many students indicated that they were looking for insights to help them choose between career paths such as academia and industry. Students who are already committed to industry careers wanted to know what it is like to be a woman in industry. The breakfast provided a great place for students to practice their networking skills, and to make valuable connections. Professional chemists who attended the Women in Industry Breakfast valued the opportunity to mentor students by sharing from their own experiences. Professionals also enjoyed the chance to meet friends and acquaintances in an informal setting.

Please join us for the Women in Industry Breakfast in Washington, DC, on Monday August 17, by purchasing a ticket when you register for the meeting. The Women in Industry Breakfast always fills to capacity, which is a testament to the strong support that we all have for the development of professional women chemists.

—Diane Kneeland

Successful Women in Chemistry

An Interview with Lisa McElwee-White, University of Florida



In this issue, we recognize Dr. Lisa McElwee-White, Professor of Chemistry at the University of Florida, Gainesville. As a young child, Lisa recalls tinkering with her chemistry set in the basement; however, she "officially" began her career in science as a premedical undergraduate at the University of Kansas. During her first semester, she was inspired by chemistry professors Jacob Kleinberg and Kristin Bowman-James and after working in the Bowman-James lab, she switched her major to chemistry and never took the biology courses! Lisa pursued her Ph.D. at the California Institute of Technology, followed by postdoctoral work at Stanford University. At Stanford, her love of teaching developed and she decided to pursue an academic career path. Professor McElwee-White was recruited to the University of Florida, where she has risen through the ranks to professor and associate dean.

When asked why she chose a career in academia vs. industry, Professor McElwee-White commented that she was drawn to the freedom, the people, and the atmosphere of a university. Her research involves applications of organometallic chemistry to problems in materials deposition, methodology for organic synthesis, and catalysis. Recent areas of research include organometallic precursors for the chemical vapor deposition of inorganic films that are of interest for manufacturing of semiconductor devices, heterobimetallic catalysts for the electrochemical oxidation of alcohols with applications to direct methanol fuel cells, and catalytic carbonylation of amines as an alternative to the use of phosgene and its derivatives. Recently, Professor McElwee-White received a Doctoral Dissertation Mentoring Award at the University of Florida. In addition, Professor McElwee-White chairs the ACS Division of Organic Chemistry and is the third woman to serve in this position.

It is clear that Professor Lisa McElwee-White's educational background, research, and accomplishments justify her recognition as a WCC Successful Woman in Chemistry. Her answers to the questions below offer both advice and inspiration to all women in chemistry.

Did you have mentors and how have they helped you along the way?

Professor Earl Huyser was an early mentor with whom she worked as an undergraduate and earned an honors thesis. She also recalls being the first graduate student to finish a Ph.D. with Professor Dennis Dougherty. Professor Dougherty taught her a great deal about starting a lab and how best to communicate with people. She adopted his style and utilized many lessons from this mentor in her own research group. From Professor James Collman, Lisa learned the importance of recruiting good people and deciding when to be "hands-off". Professor Collman taught her the importance of empowering others to follow their own instincts to achieve a shared goal of quality research.

How do you balance work and life?

Lisa is married and has two daughters, ages 12 and 18. She comments that work/life balance is an "imperfect balance" and that it is important to be realistic, to compromise when necessary, and to pick and choose as best as one can. She has never met anyone who had it all by doing it all. She believes that her kids are proud of her despite the fact that she is not at every horse show or school event. In particular, Lisa shared one personal story about this imperfect balance. She was asked to present at an upcoming Gordon Conference, where she was expected to attend the entire week. This conflicted with her daughters' world championship horse show competition. Her solution? She carefully negotiated the time she would spend at the Gordon Conference and decided she would leave after her presentation. She then sat down with her daughters to explain that she would make part of their competition, but not the entire week. She was really proud of how her daughters handled the situation and how understanding they were of her conflict.

What do you do outside of work for fun?

Lisa and her family are horse-lovers. They have several horses, and her daughters are world champions in horse competitions. She also enjoys playing the flute and often plays in concerts. Lisa stressed that it is extremely important to have interests outside of work.

What worked for you that would be good advice to someone starting their career?

Professor McElwee-White suggests focusing one's energy and time on the work that makes the biggest impact–the important things that best meet one's goals and objectives. This approach requires learning how to say no, especially to the many, many committees that present themselves. She also advises to throw all your passion into your work and try not to sweat the small stuff.

What traits make a good leader/ manager?

Professor McElwee-White emphasized confidence to follow one's own path; however, listening to others and weighing their opinions matter as well. She recommends respecting different points of view, even in disagreements, and fostering an atmosphere open to debate. She often finds that when graduate students gain the confidence to challenge an idea and win a debate, it is time for them to graduate.

What traits make a good chemist?

Professor McElwee-White believes that a good chemist should be curious about how things work, looking for clues to help design experiments. She says, "As long as you pick up on the right clues, this inevitably leads to good science."

—Kelly M. George

Call for WCC Lectureship Award Applications

Let the ACS Women Chemists Committee help you enhance your seminar program!

WCC is accepting applications for the WCC Lectureship Award. This program is designed to offer financial support for women colloquium speakers to present their scientific work. The Award seeks to enhance the reputation of early and mid-career women chemists and chemical engineers in academe, industry, and government by supporting their presentation of invited technical talks at doctoral degree-granting institutions.

To qualify for funding the invited speaker(s) should be 'rising stars' in their field and of the quality you normally bring to your seminar series. 'Rising stars' would include chemists and chemical engineers from academe, industry, or government with a record of accomplishment in research, and who are within ten-years of employment after a graduate or postdoctoral experience. Women speakers from academe should be tenure-track assistant or associate professors. Women who are already widely acknowledged and recognized in their area of chemistry or chemical engineering and are at the pinnacle of their careers will not be considered competitive for this program,

The maximum amount available for reimbursement is $1,000. Funding may cover transportation, lodging, and childcare, but not honoraria, refreshments, or meals. The award may be used to support more than one speaker.

Awards are made on a first-come, first-served basis for seminars prior to December 2. Funding is limited –only twelve awards are available so send your application in early. For more information and to access the application form, visit http://portal.acs.org/portal/PublicWebSite/membership/acs/welcoming/diversity/WPCP_010559.

Teaching Chemistry to a Diverse Student Body Symposium

Thomas Higgins and Mary Boyd organized this session as a workshop designed to connect two-year college faculty with four-year college faculty. The sessions was sponsored by the Committee on Minority Affairs and cosponsored by the WCC, the ACS Division of Chemical Education, and the Younger Chemists Committee. Each presenter had two consecutive slots to present the concepts of their method and conduct a group activity or example. Thomas J. Greenbowe, Iowa State University, Ames, IA, gave an overview of teaching a general chemistry laboratory using the Science Writing Heuristic (SWH) method. He noted that in a typical laboratory class, where yield and purity determine one's grade, the student learns experimental techniques, but little else. The emphasis when using SWH is on inquiry and collaboration. A question such as, "What is the role of solvent?" is posed, and students in small groups develop hypotheses and design experiments to test them. Ideally, the student will acquire the ability to connect concepts with tests and observations to refine the concepts.

Christine Brooms, Prairie State College, Chicago, IL, compared in-class and online Process Oriented Guided Inquiry Learning (POGIL) activities. POGIL offers a variety of tools for working with small groups of students in class and in online chat rooms at levels ranging from high school through college. Facilitation of activities by the teacher may be "just in time" on campus, but is often after the fact online where the teacher monitors activity by reviewing chat room logs.

Pratibha Varma--Nelson, Indiana University-Purdue University Indianapolis introduced the Peer-Led Team Learning (PLTL) strategy for improving success of a diverse population. PLTL takes advantage of the importance of peer group involvement in intellectual development, particularly for women and minorities. An experienced learner who has taken the course is recruited and trained to lead teams of 6–8 students in PLTL workshops that meet for 1.5–2 hours per week. Jessica Blackerby, Indiana University-Purdue University Indianapolis, IN, continued the PLTL presentation with details of the orientation and continuing training of the peer leaders.

David Collard, Georgia Institute of Technology, Atlanta, GA, Codirector of the Center for Workshops in the Chemical Sciences, spoke of this nationwide program of workshops that provides opportunities for teachers to enhance their background and knowledge of new pedagogies in a variety of fields. These workshops have resulted in the development of new programs and provide valuable networking opportunities especially for those from small departments.

The session ended with a fascinating report by Scott Donnelly, Arizona Western College, Yuma, AZ, on the workshops he has participated in (Teacher at Sea, Chemistry in Art, forensics, and a Chautauqua short course on energy development in the Arctic), and how he has shared these experiences with his students.

—Eleanor Brown

Women Chemists Committee Luncheon

The Women Chemists Committee Luncheon at the 237th ACS National Meeting was held Tuesday, March 24, 2009, at 12:00 p.m., in the Salt Palace Convention Center, Exhibit Hall 2 in Salt Lake City. Dr. Dawn Brooks, Chair of the WCC, gave the welcome and introduction of the dignitaries and the 12 WCC/Eli Lilly Travel Award recipients. Lunch was served after which Brooks introduced the Garvan-Olin Medalist, Dr. Kathlyn Parker, noting Dr. Parker's service to the chemistry community in mentoring many students in synthetic organic chemistry and her continuing research in natural products and the development of molecular tools. Dr. Parker's talk was titled, "Funny You Don't Look Like an Organic Chemist…", a reference to Groucho Marx's introduction of guests on his television show and started by showing photos of Groucho Marx and Emil Erlenmeyer, the renowned synthetic organic chemist. Dr. Parker was dressed in a beautiful green jacket and though short of stature, spoke in a confident voice about her long career in chemistry and of definitely not being anyone's first thought of the typical synthetic organic chemist, but reiterated the need for "synthetic chemists more than ever".

Dr. Parker mentioned drawing inspiration from Dr. Davidson who taught her high school organic chemistry class and laughingly spoke of choosing Stanford University for graduate school because she "wanted to see a palm tree". She joined the faculty at Brown University and rose to the rank of professor during her 28 years there. She has consistently been active in ACS public policy serving on the Committee on Chemistry and Public Affairs and was only the second female chair of the Division of Organic Chemistry. She is currently a member of the Committee on Science. In 2001, she moved to Stony Brook University and studies natural products and the design and synthesis of "molecular tools".

She talked animatedly about why it is so exciting to "make molecules for practical applications…[and that] we can now make real quantities of synthetic drugs." She spoke of how synthesis has become much like architecture and chemists can utilize building block molecules or pieces of molecules to create new structures. "With computers to manage files for us, we have changed the way we search the literature with the immensely powerful ability to search for pieces of molecules on which to build new chemicals and base new drug discoveries."

The WCC luncheon concluded with photos of Dr. Parker, the Travel Award winners, and dignitaries in front of the very colorful luncheon backdrop.

—Marsha Lambregts

Kathlyn Parker and Dawn Brooks

Photo courtesy of Janet Bryant

Dawn Brooks, Madeleine Jacobs, Kathlyn Parker, ACS President-Elect Joe Francisco

Photo courtesy of Janet Bryant

Alternative Energy Sources: Women at the Forefront of Science

The Women Chemists Committee organized a symposium entitled, “Alternative Energy Sources: Women at the Forefront of Science”, with cosponsorship from the Division of Professional Relations at the ACS National Meeting in Salt Lake City. Judy Cohen, Chair of the WCC Local and Regional Outreach Subcommittee, presided over the symposium. Four outstanding women scientists discussed their work with regards to energy sources for different applications that ranged from phosphate based materials for implantable medical devices to novel processes for production of biofuels.

Alternative energy is the use of nonconventional energy sources to generate electrical power and fuel vehicles for today's residential, commercial, institutional, and industrial energy applications. This includes emergency power systems, transportation systems, on-site electricity generation, uninterrupted power supply, and many more innovative applications. In a year when prices at the gas pump exceeded four dollars per gallon and winter heating costs soared nearly 50%, consumers are looking for ways to lower their energy costs. However, it’s important to realize that this need for alternatives to our current energy sources reaches out to all areas of our lives.

The first speaker was Dr. Esther Takeuchi, Professor in the Departments of Chemical and Biological Engineering, Electrical Engineering, and Chemistry and Director of the Advanced Power Sources Laboratory at the University at Buffalo. She currently also acts as codirector of the New York State Center for Advanced Technology at the University at Buffalo. Dr. Takeuchi holds 134 patents, more than any other woman in the United States. Her best-known invention is the lithium/silver vanadium oxide battery used in the implantable cardioverter-defibrillator, which monitors and corrects irregular heart rhythms. In her talk entitled, “Investigation of Phosphate Based Materials for Implantable Battery Applications”, she discussed her current work with a silver vanadium phosphorous oxide (Ag2VO2PO4) cathode material for an implantable cardiac device.

The next speaker, Dr. Ellen Stechel, is responsible for program development and program management in the Energy Futures Group at Sandia National Laboratories, where she concentrates on building research programs and capabilities in energy technologies to simultaneously reduce the nation's dependence on fossil energy and reduce greenhouse gas emissions. Using concentrated solar energy to reverse combustion, a research team from Sandia National Laboratories is building a prototype device intended to chemically “reenergize” carbon dioxide into carbon monoxide using concentrated solar power. The carbon monoxide could then be used to make hydrogen or serve as a building block to synthesize a liquid combustible fuel, such as methanol or even gasoline, diesel and jet fuel. Her talk, “Sunshine to Petrol”, outlined the advancement of this technology.

The third speaker, Dr. Kelly Tiller, is the Director of External Operations for the University of Tennessee’s Office of Bioenergy Programs, where she manages a $70 million state and university commitment to develop a cellulosic biofuels industry in Tennessee utilizing farm-based energy crops. She also serves as the president and CEO of Genera Energy LLC, which has partnered with DuPont Danisco Cellulosic Ethanol to construct and operate a pilot scale cellulosic ethanol biorefinery in East Tennessee to produce switchgrass-based ethanol. In her talk, “Tennessee Biofuels Initiative from Grow to Go!” Dr. Tiller discussed the logistics of this initiative and the ability to develop a viable, sustainable, long-term path to commercialization of cellulosic biofuels.

The final speaker of the session, Dr. Susan Leschine, is a professor of microbiology and codirector of The Institute for Massachusetts Biofuels Research at the University of Massachusetts, Amherst, MA. She is a founder and chief scientist at Qteros, a biofuels technology company headquartered in Massachusetts. Dr. Leschine discovered the Q Microbe, a tiny bug that has proven to be amazingly efficient at converting cellulose, non-food plant matter, into engine-firing ethanol. Her talk entitled “A Novel Biocatalyst for Cellulosic Ethanol Production” described the process for converting biomass to ethanol in a carbon-neutral process that doesn’t require the additional enzyme treatments that usually accompany bioethanol production.

This well-attended symposium featuring such dynamic speakers was very successful in highlighting the importance of alternative energy and the role of women scientists in this field.

—Judith Cohen