

Program Report

[PROF 1 DNA Forensics: Paving the Way to World Peace](#)

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Scientists are embarking on a major effort to identify the remains of as many as 30,000 missing persons. This project will use DNA testing to identify the remains of victims of the worst massacre in Europe since World War II. The plan is to sequence nuclear and mtDNA to match remains of the some 30,000 victims with DNA extracted from blood samples of relatives. This project is carried out under the auspices of the International Commission on Missing Persons (ICMP). The ICMP was created at the G-7 summit in France in 1996. Two DNA Testing Laboratories have been established in Bosnia and a third in Banja Luka will open later this year. Scientists in the local area are being trained in the DNA identification techniques by chemists from the United States who have carried our similar test procedures in the Armed Forces Identification Laboratories in Washington, D.C. The analytical procedures used in these identification techniques will be discussed along with the international relationships which must be established both to gain the respect and confidence of the families of the victims and relationships which must be maintained and nourished to secure funding for the project.

[PROF 2 USDA Experimental Research Reaching Around the World](#)

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Research performed at the USDA Laboratories has had a tremendous impact on agriculture around the world. Natural resource management, disease, insect, and drought resistant crops, improved fertilization and crop management techniques have helped to alleviate poverty and world hunger. Chemists in USDA labs have developed methods for utilizing natural products in the production of everything from diesel fuels to protein supplements for the vegetarian diet. However scientific developments have produced new questions and challenges such as those posed by cloning and genetically altered crops. In addition, Globalization has had a tremendous impact on agriculture and the USDA chemist has had to become a key player in the international arena in regard to how we grow, process, market, consume and dispose of food around the world. This paper will discuss and review the international aspects of the career of an agricultural chemist.

[PROF 3 International Standards and the Chemical Professional: A Changing Landscape](#)

David Schutt, American Chemical Society, 1155 Sixteenth Street, NW, Washington D.C, DC 20036, dls93@acs.org

Globalization is no longer a hope or a fear: it's a reality. With it, came a host of changing business practices and marketplace expectations, such as Quality Management and Environmental Management Systems (ISO 9000 and 14000). The international marketplace places great emphasis on standards as a way of unifying markets and ensuring common practices. Those that are able to meet these requirements clearly have a competitive advantage. Standardization, however, does not happen on its own. Professionals from all areas of expertise forge mutually agreeable standards for the global market place and implement them through their companies and industries. This rapidly changing landscape has clear implications and opportunities for the globally savvy chemical professional. This talk will explore the latest development in the area of standards relate to chemistry.

[PROF 4 Managing global research projects](#)

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Chemical industry is strongly global, and increasingly chemical corporations with worldwide facilities are coordinating research projects globally. This means managing resources (such as people, equipment and budgets) and managing progress across both cultures and time zones. In addition to discussing these topics in the context of an industrial research project, this presentation will also address the challenge of managing global expectations.

PROF 5 Bringing an International Perspective to the Chemistry Classroom

Zafra M. Lerman, Institute for Science Education and Science Communication, Columbia College Chicago, 600 South Michigan Avenue, Chicago, IL 60605, Fax: 312-663-5172, zafral@aol.com

In a chemistry class developed by the Science Institute at Columbia College, an important teaching method is to show students how chemistry is an international enterprise, and how contributions come from all over the world. The history of radioactivity and the atomic bomb provides an ideal format to cover the concepts needed to understand how nuclear power plants are used as a source of energy. The discussion of radioactivity starts with Becquerel (Paris) and Mme. Curie (who came to Paris from Poland), continues to Hahn and Strassman (Germany) as the first to split the atom, and who sent their results to Lise Meitner (Scandinavia) which formed the impetus for the Manhattan Project (U.S.), resulting in the dropping of the atomic bomb (Japan), bringing World War II to an end. In this class, students create projects using 2D and 3D animation, and incorporate the international aspects of the subject.

PROF 6 Differences in Cultures and How to Adjust in the Business Environment

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An important lesson which the chemist must learn in an international environment is to acknowledge cultural differences and be prepared to deal with them. Today, mastering communication across cultures is essential for success in a business setting. Simple things as indentifying non verbal communication in another culture can avoid misunderstanding a message. The country culture and its education system, will dictate the business ethics as well as the management style, and reflect in everything from the customer service to the presentation of a technical report. These cultural differences will be highlighted and suggestions made for how they can be dealt with.

PROF 7 International education at the undergraduate and graduate level

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Although, international education has been the domain of non-science undergraduate students for many years, chemists need this experience at least as much as non-scientists because of the rapid globalization of the work environment. Three programs to permit international experience for chemistry students will be described. The TransAtlantic Science Student Exchange Program (TASSEP) has been sending about 25 students per year to European Universities to take their junior level chemistry courses in the foreign language. Undergraduate research experience has also been provided through a summer REU program based at the University of Florida, which sends 5-10 students to France every summer to carry out research at French Universities. A recent initiative involving the Universities of Florida, Texas, and North Carolina expands international education to research at the graduate level.

PROF 8 Science for the Good of the People? The On-going Experiment in Cuba

Susan Monroe, Former Senior Supervisor Analytical Services, Sulzer Biologies, Inc, 14681 Kalamath Court, Westminster, CO 80020-8733, drsmonroe@attbi.com

I was very fortunate to be asked to participate in a Women in Science delegation to CUBA in May 200. I met with highly educated, very hard working women, products of the revolution. They are wards of the state from birth. Education is free. CUBA has the highest literacy rate in our hemisphere.

The lure of Communism and Socialism is always the noble idea of working for the good of all mankind. These Cuban scientists are truly working for the good of their people and their country. This talk summaries a few of the scientific accomplishments that amazed our small group of American women scientists.

[PROF 9 What the committee on professional training has learned from its recent surveys of Ph.D chemists reflecting on their doctoral experience](#)

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Abstract text not available.

[PROF 10 The objectives of doctoral programs in chemistry from the university viewpoint](#)

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Abstract text not available.

[PROF 11 Industry perspectives of the effectiveness of doctoral programs](#)

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Abstract text not available.

[PROF 12 Agency perspectives on the objectives of doctoral education in the chemical sciences](#)

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Abstract text not available.

[PROF 13 What industry wants in new advanced-degree chemical scientists](#)

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Abstract text not available.

[PROF 14 Perspectives from the generality of nation-wide data to the particulars of hiring faculty at a doctoral and a non-doctoral institution](#)

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[PROF 15 The needs and expectations for NASA scientists](#)

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Abstract text not available.

PROF 16 Beyond the degree: Skills industry looks for in Ph.D. chemists

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PROF 17 2001: A progress report on Delaware Chem Vets

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The Delaware ChemVets is a highly successful group of mature chemists who meet regularly and also serve as valuable resources for the Delaware section. Members of this group have served (and continue to serve) as section officers, committee chairs, and volunteers. The group provides particularly useful service to retired chemists and chemical engineers in the Wilmington area. In 2001 they organized seminars on diverse topics and met 8 times at lunchtime. The speakers included Ed Wasserman (on his experience as ACS president), Diane Herson on bioremediation, Doug Buttrey on high temperature superconductors, Herb Eleuterio on knowledge creation in material science, Stephen Toy on bio-weaponry, Rolf Dessauer on novel color chemicals, Mary Miele on melanoma, and Chad Tolman on global warming. It is of interest that the talk on bio-weapons antedated the anthrax incidents in October 2001. In addition, the ChemVets participated in Delaware Section's many regular activities. Who says that you can't have fun when you become "mature"?

PROF 18 ACS North Carolina Section Senior Chemists Committee activities help older chemists stay active

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The North Carolina Section has established a committee for its more senior members. The organization was founded on April 21, 2001 with the election of three officers: President Richard Theuer, Vice President: Raymond Davison and Secretary-Treasurer: Maurice Bursey. Duties of the officers were established and a Mission Statement was created. The group meets regularly once a month in a special setting for luncheon gatherings. A program agenda is primarily prepared each year with activities. A web page supported by the local section is under development. At each meeting one or more of the members offers a short 5-15 minute retrospective of what they had done as a chemist in their career and where their present interests lie. The members are interested in finding new ways to continue communication with their chemist friends, many of whom have recently moved from the northern climates to the retirement areas of North Carolina. One of the highlight meetings each year is a joint meeting with the Younger Chemists Committee held at lunchtime near Research Triangle Park.

PROF 19 Delaware Chem Vets: 25 years and still going strong

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The ChemVets, a mature chemists' group of the ACS Delaware Section, is celebrating its 25th anniversary this year. Back in 1976, the Delaware Section surveyed its members and found that many retirees desired some activities specific to their interests. (In Delaware, roughly 30% of its members are retired or semi-retired.) Several retirees, including Herman Skolnick and Carleton Conrad, started this

group, which had its first general meeting on 1/20/77. The ChemVets meetings have grown in frequency and attendance over the 25 years. Typically the group gathers for lunch and seminar 8 times per year. The topics range from financial planning to cutting-edge science. The meetings provided opportunities for social exchange and for networking, particularly for those in consulting and other businesses. The group is guided by a steering committee of active members. The Delaware Section benefits from the help and the wisdom of these veterans. They are an excellent example of what volunteerism, personal initiative, and enthusiasm can do in a local section.

PROF 20 Pittsburgh Chemists club/ACS Retired Chemists Group

Mordecai Treblow, Retired, 6655 Northumberland Street, #2, Pittsburgh, PA 15217, Fax: 412-421-4067

The Pittsburgh Chemists Club and the ACS Retired Chemists Group have been meeting jointly for four years. We had six regular meetings and cosponsored another. We participated in National Chemistry Week with our own display, Chemistry in Costumes for Dance and Theater. Our theme was: costumes, like all clothing, are made of fabrics, which in turn are composed of synthetic and natural polymers with colors due to chemical dyes. We sponsored lectures by a costumier and original dances by Point Park College dance students. For the first time the group presented the ACS 50 year members awards for the Pittsburgh Section with a talk by Denise Creech, Assistant Director, ACS Membership Division.

PROF 21 Preparing to be a Senior Chemist: A rewarding and career-enhancing experience

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After reviewing what the ACS Mature Chemist Career Survey tells us about "modern retirement" for chemists, career continuation after formal retirement will be discussed. It's not just emeritus professors who can stay active in the chemistry. Becoming a consultant is one popular option. The author also will present interesting case histories of other creative ways senior chemists have found to stay involved in our science and often enter new fields of chemistry.

The author will present creative and enjoyable strategies to prepare for staying involved in chemistry while being retired or working part-time. When chosen carefully and executed well, these strategies can also make your working career more rewarding and increase your job security.

PROF 22 Women in the Academy

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Although the number of women earning the Ph.D. has increased significantly over the past thirty years, a lower percentage of women than men choose to go on to careers in higher education, particularly in the fields of science and engineering. Furthermore, the percentage of women in science and engineering who occupy administrative positions is extremely low, especially in the top fifty institutions. I will discuss the factors that contribute to women's persistence and success in careers in higher education and college and university administration.

PROF 23 Women in Chemistry at Rutgers

Martha Greenblatt, Department of Chemistry and Chemical Biology, Rutgers university, 610 Taylor Road, Busch Campus, Piscataway, NJ 08854-8087, Fax: 732-445-5312

The Department of Chemistry and Chemical Biology at Rutgers University has 42 faculty members, of whom 10, or 24 %, are women. This is the highest percentage of women in the chemistry department of any major research university in the nation. Moreover, two of the ten women hold named Chairs,

another is a Professor II (Distinguished Professor), three are Professors, and three are Associate Professors, and one is an Assistant Professor. One of these women served as Department Chair; another has served for some time as Graduate Director, and two serve as heads of research centers within the University. All of the women are very successful professionally, most with large research groups and strong federal grant support. The factors that contributed and continue to contribute to the large number and great success of women in Chemistry at Rutgers will be examined.

PROF 24 Experiences of Women Chemists at Boston University School of Medicine

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Undergraduate and postgraduate training in chemistry often leads to careers in adjacent fields, and it is useful for career-planning purposes to investigate the positions open for women in these very relevant and exciting areas. As do many medical schools, Boston University School of Medicine has a graduate program that leads to PhD, MD/PhD and MS degrees in the basic sciences. Because of its history, having been founded as the first medical school for women in the US, and because of the long tradition of BU as an institution that welcomes the contributions of minorities, the role of women at BUSM is one of equality. Women are well represented among the faculty, graduate and medical students, and hold senior administrative positions. The situation for women at the medical campus will be the focus of this discussion, but data for the department of chemistry and related departments on the main campus will also be included.

PROF 25 Women in Chemistry at the University of Kansas

Kristin Bowman-James, Department of Chemistry, University of Kansas, 1251 Wescoe Hall Drive, Lawrence, KS 66045, kbjames@ku.edu

The University of Kansas had an early history of women on its faculty, starting in the 1920s. However, by the late 1940s, there were no longer any women faculty. In 1975, one woman was added to the faculty (the presenter of this paper), followed by two more over the next 20 years. Now, in 2002, there are seven women on the faculty out of a total of 27 faculty. The history and experiences of women on the faculty in chemistry at the University of Kansas will be discussed.

PROF 26 Women in Chemistry at Illinois State University

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Currently, there are five female faculty members (four tenured and one tenure-track) out of twenty in the Department of Chemistry at Illinois State University. This percentage is high compared to the national average for similar institutions. In addition to being successful in recruiting and retaining female faculty members, the Department has been successful in attracting female undergraduate and graduate students. In this presentation, we will discuss the environment in the Department of Chemistry as well as the factors that we believe contribute to its success in this area.

PROF 27 Alternative views: Not your traditional chemistry department

Laura Lee, Department of Chemistry, Lock Haven University, Lock Haven, PA 17745, llee@lhup.edu

Lock Haven University of Pennsylvania is the third smallest of the fourteen state universities in Pennsylvania. While our chemistry department is traditional in many ways, we are certainly not typical in composition. We have faculty in traditionally defined areas of chemistry and basically teach the standard

curriculum. However we do have a history of having a large percentage of women faculty members in chemistry. The impact and consequences of having a several women chemists in our department will be presented with three areas of emphasis: students career development, faculty growth as professionals and the workplace environment.
