

American Chemical Society

Form: Part II - Annual Narrative Report
Organization: Delaware
Year: 2007

A. Activities

Please describe and rank up to ten of your section's activities during 2007. Provide (a) the title of the activity, (b) a one paragraph description of the activity, and (c) an indication if this activity was new in 2007. If you wish to provide details beyond these paragraphs, please do so in Appendix 1.

Activity #1

a) Title: Conservation Sciences

As the demand for energy increases in the United States and the rest of the world, we are encouraged to look out for various methods of conservation of energy and alternative energy sources. The Delaware Section of the ACS took upon themselves to educate their members and guests on a broader topic of "conservation sciences", not only in the energy sector, but also in environmental and art conservation sciences. Seven meetings were held to address various topics on conservation science throughout the year.

1) Conservation Science: "The Forensics of Cultural Material" by Catherine R.Matsen and Dr. W. Chris Petersen from the Winterthur Museum. They captivated the audience by revealing the mysteries of cultural artifacts and how to preserve them for future generations to enjoy.

2) The Section participated at the 14th Annual Earth Day celebration at AstraZeneca. We provided membership information, articles on Green Chemistry, and engaged the visitors in discussions during the event (~30 exhibitors and 1500 attendees).

3) US President George W. Bush visited Biofuels Research Labs at DuPont the day after he promised more funding for biofuels research during the State of the Union address in 2007. Soon after that, we organized an event titled, "Towards the BioBased Economy" by Dr. David L. Anton from DuPont.

4) Dr. Gabriela Stoleru, University of Delaware presented her research on the topic for future possibilities for alternate sources of energy. The title of her talk was "Band gap Engineering in Nanostructures for Optoelectronics and Photovoltaics."

5) Dr. Robert W. Birkmire ("Solar Electricity Generation: Crystalline and Thin Film Photovoltaics") at the Institute of Energy Conversion, Delaware talked about Solar electricity generation and its future.

6) Dr. Kris McNeill, University of Minnesota talked about "Photochemical Reactions in Natural Waters" in December.

7) ChemVets organized the talk "Offshore Wind Power in the Middle Atlantic" by Willett Kempton, College of Marine and Earth Studies, University of Delaware.

Description
(Please limit to
b) one paragraph): Throughout the year, the members were encouraged to discuss ideas of conserving energy in homes, classrooms and offices and to publish them in the newsletter.

c) This activity was new in 2007

Activity #2

a) Title Carothers Award - Prof. Richard DiMarchi

A highlight of the Delaware Section in 2007 was the Carothers Award event. The banquet and associated activities took place on March 22, 2007 at the DuPont Country Club. It was a splendid success. Over 65 ACS members attended the event to celebrate DiMarchi's award and hear his lecture on "Application of Chemical Biotechnology to the Optimization of Endocrine Hormones."

In addition, we were privileged to have the last surviving member of the Carother's lab, Joe Labovsky, provide a fabulous display of Carother's artifacts from his time at DuPont at the 2007 Carother's event. Guests were delighted to be able to talk to him and share the joy of the discovery of Nylon.

Since its inception in 1976, the Carothers Award has established itself as a prestigious award given internationally to scientists who have made outstanding contributions and advances in industrial applications of chemistry. It was named after Wallace H. Carothers, inventor of Nylon and one of the founders of modern polymer chemistry. Past awardees include such illustrious scientists as Edwin H. Land, Herman F. Mark, Paul J. Flory, Ralph F. Hirschmann, K. Barry Sharpless, Richard Heck, and Robert S. Langer. The 2007 award was sponsored by the Delaware Section, and by DuPont, AstraZeneca, Hercules, W. L. Gore, Eli Lilly, and Indiana University.

The 2007 award winner, Richard DiMarchi is the Linda & Jack Gill Chair in Biomolecular Sciences, Professor and Chairman of Chemistry at Indiana University. He is a retired Group Vice President at Eli Lilly & Company where for more than two decades he provided leadership in biotechnology, endocrine research, and product development. He is a co-founder of Ambrx, Inc. and Marcadia Biotech. He serves as a board member to Ambrx, Marcadia, Isis Pharmaceuticals, and Alba Therapeutics. He is a scientific advisor to Epitome Biosciences, Kai Pharmaceuticals, Semafore Biotechnologies, 5AM Ventures, and Twilight Ventures.

Dr. DiMarchi is readily recognized for discovery and development of rDNA-derived Humalog® (LisPro-human insulin). This designer insulin represents the first demonstration that structurally altered rDNA-derived

biosynthetic proteins can improve pharmacological performance without increasing the risk of an abnormal immunological response. As a scientist and an administrator Dr. DiMarchi participated in the commercial development of Humulin®, Humatrope®, Xigris®, rGlucagon® and Forteo®.

The goal of his current research and commercial endeavors is to develop proteins with enhanced therapeutic properties through biochemical optimization with non-natural amino acids, an approach he has termed chemical-biotechnology. He has published more than one hundred papers and is the co-inventor on ninety patents. He recently received the 2005 AAPS Career Research Achievement Award in Biotechnology, the 2006 ACS Earle B. Barnes Award for Leadership in Chemical Research Management, and the 2006 ACS Gustavus Esselen Award for Chemistry in the Service of Public Interest. The scientific work from this laboratory was central to the discovery and the commercial development of a number of prominent protein-based medicines, such as Humulin®, Humalog®, Humatrope®, rGlucagon®, Xigris®, and Forteo®. Humalog represents the first biosynthetic hormone optimized by rDNA technology approved as a human medicine. It established the precedent that endogenous hormones are not optimized for use as drugs, and that through insightful structural modification a more efficacious and safer protein could be developed.

More recently new technologies in protein biosynthesis are emerging that dramatically enlarging the structural space that can be utilized by protein medicinal chemists. The simultaneous mutation of tRNAs and the tRNA-Synthetases has demonstrated that amino acids previously restricted to chemical synthetic approaches can now be successfully utilized in rDNA-based biosynthesis. This period in protein chemistry is quite analogous to the advent of rDNA-based synthesis when the first natural sequenced proteins were produced and the foundation for the delivery of optimized proteins was established. The application of chemical biotechnology to peptides and proteins of importance in endocrine diseases was presented.

Description
(Please limit

b) to one paragraph):

c) This activity was new in 2007

Activity #3

a) Title

Industrial-Academic Collaborations

Delaware Section has a strong industrial presence with many chemical companies. The Section is also blessed with the University of Delaware and a few smaller universities. An effort has been made in 2007 to bring the local industries and academia closer together to improve collaborations, partnerships and to educate the students on the job searchers and to make the "real world" experience a possibility.

First, an event was organized with the partnership of University of Delaware (UD) and AstraZeneca

Pharmaceuticals (AZ) in 2007. A meeting was arranged for 13 technical and higher management staff of AstraZeneca Pharmaceuticals to present a seminar on the research capabilities within AZ and to discuss the skills desired for new hires. Nearly 35 students and faculty members attended the meeting that led to discussions on research capabilities within UD and AZ. Future collaborations were also discussed. Delaware ACS hopes to continue similar events with various companies and Universities within the region.

Secondly, in accordance with the National Chemistry Week events, Tower Hill High School Science teacher and ACS member, Leigh Thompson, coordinated an event to allow high school students to interview industrial/academic professionals to find out what chemists do in their jobs. The interviews were conducted via emails and phone conversations. Approximately 52 local area chemists participated.

Thirdly, another event held to promote the relations with industry and academia was the Delaware Section's 7th Annual Student-Industry Poster Session meeting held in Gore Hall, University of Delaware, on Wednesday April 18, 2007. Invitations were sent to all colleges and universities within convenient driving distance to the University of Delaware. All chemistry departments were invited as well as other related chemical sciences, including, engineering (Chemical, Mechanical, Material Science), biology, soil science, and animal science. Invitations were also sent to local companies for industrial posters. Managers were encouraged to spread the word and file the necessary release forms.

All the posters were rated by a panel of judges. Students were encouraged to answer judges' questions. Monetary prizes were presented for 1st and 2nd places in each of the following categories - undergraduate, graduate, and post-doc. This event was well attended, with over 40 posters entered and the event was appreciated by the faculty and students for providing both an outlet to present their work as well as give them exposure to industry. They also appreciated the free pizza and soda that were provided by the Delaware Section.

Description
(Please limit

b) to one paragraph):

c) This activity was new in 2007

Activity #4

a) Title: Kids and Chemistry

The Delaware Section has been organizing a successful, broad-based, multi-pronged community outreach science education program to area precollege students for several years. 2007 was another banner year, with particularly outstanding results.

As any teacher knows, education requires consistent and sustained efforts. Delaware Section's philosophy is indeed to provide this steady effort, with special events calculated to energize the volunteers and to

bring excitement to the students. These programs included Kids & Chemistry, Library programs, Elementary Olympiad for public schools, school visitations, and NCW open house and poster contest. The following account provides a summary.

1. We held 5 library science programs - in Cecil County, MD and in Delaware. These programs gave hands-on demonstration and workshops on multiple scientific topics. These programs were held year round, with 30-100 children at each program, ages 6-11, participating in each of these activities. In our library program, we read at least one short book illustrating a point we are emphasizing. This is followed by hands-on activities.

2. The Delaware Section assisted three local companies (Dade Behring, DuPont, and AstraZeneca) in their Take-Your-Child-To-Work activities.

3. We held hands-on demonstrations/Science badges for Brownie and Girl Scout Troops as well as for Cub Scouts and Boy Scout Troops. We presented demonstrations at Hagley Museum and Library Invention Convention, Hagley Museum and Library Summer Science Workshops, Delaware History Museum Wallace Carothers' Day, and Tower Hill Middle School Assembly. As an example, Hagley Museum's Summer Science Sunday was held on each Sunday in August to explore a different science theme. As a part of this, McKean High School chemistry teacher Dr. Michael Stemmiski performed a chemistry demonstration. In the Wheelwright Shop, children played with polymers during two activities presented by Mad Science. In Blacksmith Hill, Hagley's restored workers community, hands-on demonstrations of kitchen chemistry in the Gibbons House and of the chemistry of ink were performed.

4. St. Mark's High School in Wilmington, DE graciously hosted our Kids & Chemistry activities in October. This program for elementary school students entailed hands-on science activities and chemistry demonstrations with high school students conducting many of the hands-on demonstrations. The activities were specially designed for the younger children and included activities such as magic show, chemical detective, toxic waste, unknown compound, food chemistry, catch your breath, chemical butterflies, "glurch," soaps & detergent, rockets and chemical muddle puzzle. High school students from St. Mark's helped in October with each of the hands-on science activities and demonstrations. The activities were received enthusiastically by the participants as well as by parents and teachers who were also part of the activities. The Education Committee of our Section coordinated this event with participation by many local science teachers, Section members, and two members of the ACS Student Affiliates.

5. We visited elementary school and conducted hands on activities with second grade students. These activities were in the same format as our library

science program.

6. We held an elementary public school Olympiad competition in April for grades 4, 5, and 6. Seventeen to eighteen events were offered - such as Science Bowl, Science clue, Science Bee, Egg Drop, Crime Busters, Chemical Jeopardy, Food Science, Grab a Gram, Measurement, Metric Master, Name That Scientist, Estamania, etc.

7. The Delaware Section held our annual National Chemistry Week Open House and poster contest on Saturday, November 10, 2007 at the Independence School in Newark, Delaware. This event was the highlight of our National Chemistry Week celebrations. The activities were planned around the theme of "Many Faces of Chemistry".

Our annual poster contest received over 150 entries from area elementary, middle and high schools. The topics were wide reaching and extremely creative. Prizes were awarded locally for the top finalists but everyone's posters were on display for the Saturday Open House.

Area companies and chemistry organizations participated in several booths that stretched the imagination of both the children and their parents. Hercules, DuPont, AstraZeneca, and ATK combined with area schools - University of Delaware, Delaware State University, Wesley College and St. Mark's High School - to provide several excellent exhibits. It should be noted that St. Mark's participation was from their newly formed Chemistry Club. Demonstration tables included making of slime, face paintings of molecules of Esters, ice cream technology, rockets, displays of solar energy hand held flash lights to cars, crime scene investigators and erupting volcanoes.

Description
(Please limit

b) to one paragraph):

c) This activity was new in 2007

Activity #5

a) Title Contact Congress

As part of the Section's thrust in government affairs, Al Denio (Section Councilor) took the lead in arranging meetings with members of Delaware's congressional delegation at their individual Wilmington offices during a Congressional recess.

On February 22, 2007, Al Denio, Narmada Gunawardena, Josh Ayers, Brian Bidlingmeyer and Wayne Brubaker met with Senator Tom Carper and staff representatives for Senator Joe Biden and Congressman Mike Castle. Topics of discussion included support for R&D funding and science education, and the outsourcing of technical jobs to other countries.

In addition to the discussions, the Section offered itself as a resource to each of the offices for science-related matters. The Section also invited

Description

(Please limit
b) to one paragraph): Senators Biden and Carper and Congressman Castle to attend the Section's events.

c) This activity was new in 2007

Activity #6

a) Title: ACS President Katie Hunt's visit to DE

The Delaware Section invited Dr. Catherine T. Hunt, 2007 ACS President, for two days in May 2007 to visit with state officials and to engage in educational activities. Delaware's Government Affairs and Education Committees orchestrated these events. Katie's visit was highlighted with speeches before both chambers of the Delaware General Assembly, separate meetings with Governor, Lieutenant Governor, and Secretary of Education, a reception for K-12 teachers, tours of the John W. Collette Science Resource Center and Delaware Biotechnology Institute, as well as five classroom visits.

Dr. Hunt's presentation before the General Assemblies focused on the ties between American competitiveness and scientific education and research. According to Hunt, "We can no longer take for granted America's continued leadership in the science and technology fields that are the backbone of our prosperous nation. Continued leadership will require reigniting our commitment to science and technology. A hardworking and entrepreneurial American workforce, coupled with aggressive federal and private investment in scientific and technological research, sent a man to the moon, harnessed the atom and sequenced the human genome. These achievements, as well as reams of other examples, have made the U.S. economy the envy of the world for most of the last century". She then laid out policy challenges that need to be addressed at the state level to continue U.S. leadership in scientific and economic terms.

Hunt and the Section's team also met with Governor Ruth Ann Minner and Lieutenant Governor John C. Carney, Jr. The discussion topics ranged from the Delaware Biotechnology Institute, which Hunt visited, functioning as a driver for scientific and economic advancement, the role of the chemical enterprise in Delaware, and the challenges of science and mathematics education.

A reception honoring K-12 science teachers was hosted by the Section and co-hosted by Delaware Secretary of Education Valerie Woodruff. It was held in the John W. Collette Education Resource Center, which was named for ACS member Jack Collette. As guests of the State Education Department, Hunt and the Section's team also visited five classrooms (High School chemistry, Grade 7, Grade 5 special education, Grade 3, and Grade 1) to observe the extraordinary work being done to improve science education through the K-12 progression.

The activity was organized by Councilor Martha Hollomon, and joined by other Section members, including Chair Narmada Gunawardena, Government Affairs Committee Chair Al Denio, and Professor Andrew Goudy of Delaware State University and Raymond Garant, a representative from ACS National OLGA.

Description
(Please limit

b) to one paragraph):

c) This activity was new in 2007

Activity #7

a) Title: Science Cafe

In order to attract new members and to bring freshness to its activities, the Delaware Section hosted its first-ever Science Cafe in 2007. The Section was thankful to the National ACS for a Grant to support this event.

After substantial planning, the Section organized this event on September 24th. Our Science cafe topic was "Polymers in human body: How people parts are different from car parts." We invited guest speaker Dr. Samuel Arthur, a Research Associate in DuPont Central Research and Development. The Cafe was held at a coffee house near the University of Delaware, Newark, DE. The event was a huge success, attracting students from University of Delaware as well as University of Maryland, professionals from local industries and a high school mathematics teacher.

Dr. Arthur led a lively discussion, which covered topics ranging from design and development of polymers for medical materials, to legal issues surrounding medical devices. Participants were given the opportunity to have hands-on experience of some adhesives devices.

The Science Cafe not only built public awareness of chemistry, but also allowed students to make connections with professionals. In view of the success in 2007, the Section plans to have another Science Cafe in early 2008.

Description:
(Please limit to

b) one paragraph):

c) This activity was new in 2007

Activity #8

a) Title: National Chemistry Week Open House

The Delaware Section culminated its 20th Anniversary National Chemistry Week (NCW) celebration on Saturday, November 10, 2007 with an Open House at The Independence School in Newark, Delaware. The Delaware Section intentionally chose a date later than the formal NCW (October 21 -27) in order to avoid known conflicts with other fall youth activities. The Open House was designed as a "chemistry fair" featuring hands-on chemistry activities arranged by a number of companies, universities, schools, and non-profit groups in the Delaware Valley area. Each organization prepared 1-2 tables of activities addressing the theme "The Many Faces of Chemistry."

The NCW Open House was a spectacular success. Over 400 people (students and parents) representing over 40 area schools attended the event from noon to 4 PM. Each student received a "Hooray for Chemistry!" bag that contained an NCW activities newspaper, a "Having a Ball with Chemistry" sticker, five other NCW stickers, a washable tattoo, a "Hooray for Chemistry!" rubber bracelet, a fuzzy "Nan-o-Mole," and a NCW pencil.

Students toured two large rooms that contained the chemistry demonstrations organized by more than 40 volunteers. AstraZeneca employees had a face painting area where students chose a chemical structure of an "essential oil" from a fruit or vegetable to be painted on their faces. Representatives from DuPont coordinated a discussion of alternative energy during which students constructed windmills and paper airplanes. ATK (a defense contractor) employees organized the assembly and launch of Alka-Seltzer rockets. The Alpha Chi Sigma Professional Chemistry Fraternity, with volunteers from Siemens, Hercules, and Marshall University (Huntington, WV), along with a local patent attorney, helped students prepare glitter slime. Hercules served Edy's Dibs bite-sized ice cream snacks, which contain Hercules cellulose gum, and discussed other Hercules product-containing items that children likely use on a regular basis, including papers towels, toilet paper, tissues, school milk containers, shampoo, and conditioners. B&WTEK led a presentation entitled "The Many Colors of Chemistry" and gave students hand-powered flashlights.

A chemistry teacher and students from St. Marks High School organized a forensics demonstration including qualitative analyses of white powders, ink chromatograms, fingerprints, tire tracks, and shoe prints. The Widener University Engineering Department assisted students with the preparation of bouncy balls. The University of Delaware Student Affiliates helped students to understand the density of different objects and to explore chromatography with coffee filters. The University of Delaware IGERT Program introduced the concepts of sustainable energy from solar hydrogen, including a demonstration of solar-powered cars.

While the many events above were extraordinarily well-received by participants, one in particular, and as yet unmentioned, was the highlight of the afternoon. The Delaware Academy of Chemical Sciences, a non-profit organization that documents chemistry history of Delaware, developed a presentation about the chemistry of Kevlar®, a synthetic DuPont fiber used to protect police and soldiers. The Academy arranged for Dr. Stephanie Kwolek, the inventor of Kevlar® and an international chemistry celebrity, to discuss the importance of chemistry research. Dr. Kwolek is a strong role model for students considering careers in the research sciences, especially for girls and young women, who are historically under-represented in such careers. Dr. Kwolek signed autographs on Kevlar® swatches and

discussed the importance of pursuing science that benefits humanity. All in attendance were fascinated by this unique opportunity to interact with a chemistry legend in such an informal setting.

Following the chemistry "fair" portion of the program, students and parents convened in The Independence School auditorium for NCW poster contest awards and a chemistry show. Narmada Gunawardena, the 2007 Delaware Section Chair, presented certificates to 16 students (from more than 300 contributors) in recognition of their outstanding NCW posters. The top posters in each age category were forwarded to ACS National for further consideration and the corresponding student artists received cash prizes from the Delaware Section. All submitted posters were on display for students and their families to enjoy during the event. Dr. Michael Stemniski from the University of Delaware then entertained and enlightened the audience with his "Chemical Demonstration Show." He provided a fascinating one hour show addressing a number of chemistry concepts. The "exploding" hydrogen balloons were a particular hit with the audience!

The NCW Open House was well-publicized in the local media. Delaware Section Publicity Chair Lois Weyer arranged extensive advertising through the email tree and other publicity vehicles, and John Gavenonis listed the event in "The News Journal" (newspaper for Wilmington, DE). In addition, the Delaware Section was fortunate to have Mr. Adam Zewe, a reporter from the Hockessin Community News, attend the event. Mr. Zewe spent approximately 2 hours at the Open House, touring the tables and interviewing the participants and volunteers. He published a 700 word article with 3 accompanying photographs in the Monday, November 12 edition of the Hockessin Community News.

Overall, the NCW Open House hosted by the Delaware Section was an outstanding success. More than 400 students and parents from over 40 schools had an opportunity to learn about chemistry in an open and accommodating environment. The 40 volunteers from more than a dozen organizations graciously donated their Saturday afternoon to help educate the next generation of chemists and chemical engineers.

Description:

(Please limit to

b) one paragraph):

c) This activity was new in 2007

Activity #9

a) Title: Textbook award to high school students

In the Spring of 2007, the Section's executive committee initiated a new program to acknowledge one outstanding chemistry student at each of Delaware's 48 high schools. Each school was allowed to select its awardee by its own criteria and in return, the Section has provided that student with a voucher for reimbursement of up to \$100 for purchase of a chemistry-related textbook.

By recognizing outstanding chemistry students in Delaware's high schools, the Section hopes to encourage these students to pursue degrees in chemistry and related disciplines in order to provide the state with its next generations of leaders in science and engineering.

The textbook award program was well received by the high school teachers and students. In addition to providing recognition to the students and the schools, this award program enabled the Section to interact more closely with the local high school teachers and students.

Description: It may be noted that the Section received an Innovative Project Grant of \$2000 from the ACS for this program. This support is much appreciated.
 (Please limit to
 b) one paragraph):

c) This activity was new in 2007

Activity #10

a) Title:

Description:
 (Please limit to
 b) one paragraph):

c) This activity was new in 2007

B. Summary - Overall Section Activities

Please summarize in *1,000 words or less*, the activities of the section in 2007 which have not been already described. Outstanding events should be described in some detail and appropriate attachments included in Appendix 3. Programs described here may be featured in publications produced by the ACS Membership Division and/or at the Local Section Leadership Conferences.

The Delaware Section executed a variety of programs and had great success in delivering the programs to its members and guests in 2007. The goals set up for the year were quite ambitious but the executive committee and volunteers made great strides in achieving these goals.

Broadly, these goals focused on developing innovative Section programming that consisted of: (1) several meetings that revolved around a timely central theme, (2) events designed to provide a forum for different membership demographics to network, (3) vigorous advocacy in support of science policy with local and national lawmakers, (4) special events to promote the relationships between academia and industry, (5) targeted activities organized by a vibrant retired chemists group (ChemVets), (6) extensive opportunities for high school students and younger children to learn chemistry and science from our talented membership, (7) YCC events designed to attract and retain undergraduate/graduate students, and young professionals, and (8) an effective awards program that recognizes talented individuals for academic, professional, and service accomplishments.

Each of these activity groups are summarized below.

(1) "Conservation Science" Theme-based Programming. Several activities were organized around this theme, as summarized above. The Chair's Column in the monthly Del-Chem Bulletin Newsletter was used in advocating ideas for alternative and renewable energy research and conservation of energy.

(2) Each event was designed to foster networking opportunities for different membership demographics. These events are described separately elsewhere.

(3) Government Affairs, Public Policy, and Policy-Based Community Outreach.

The Section's efforts in government affairs, public policy, and policy-based community outreach spanned several unique and distinct activities that allowed the Section to engage federal and state legislators. For instance, the Delaware Section met with Senator Tom Carper and the staffs of Senator Joseph Biden during which the Section members advocated science and education policy. Furthermore, Al Denio contributed a regular supplementary column in Del-chem Bulletin that often focused on environmental affairs and energy efficiency. In addition, the Section was fortunate to have the honor of hosting the ACS president Dr. Catherine Hunt, address the Delaware legislature, have discussions with the Governor and Lt. Governor of Delaware to promote what ACS has to offer to science education to public policy making to issues in the renewable energy sources. Dr. Hunt was also given the opportunity to address students in their classrooms and participate at a Teacher Appreciation event at the John Collette Education Center in Dover, DE.

(4) In April, a Student/Industry poster session was held where local industries and Universities had the opportunity to exhibit their research and network. A seminar was organized for one of the biggest employers in Delaware, AstraZeneca Pharmaceuticals, to address the University of Delaware students and faculty to discuss the research and educate the skills required for employment.

(5) Retired Chemists "ChemVets" Group Our ChemVets organization was very active in 2007, arranging 8 lunchtime seminar programs designed to appeal to Delaware's retired chemists community. Topics ranged from Avian Flu, DNA Forensic Analysis, Offshore Wind Power, to pharmaceutical research and to fiber research.

(6) Kids and Chemistry Activities.

The comprehensive Kids and Chemistry program represented the efforts of the entire chemistry community in the Delaware Section, the student affiliates, YCC and the senior chemist group (ChemVets). We partnered with local schools, companies, museums, libraries, and scout troops to reach a wide range of students in Delaware's three counties (New Castle, Kent and Sussex), Cecil County, MD, and Chester County, PA. We attracted a large and diverse pool of volunteers, including many ACS Delaware Section members, students and teachers representing about 75 public, parochial and private K-12 schools, 4 universities/colleges, parents, chemists working for 12 different companies, 3 professional organizations, retired chemists, and Scout Troops. The various activities of this program

reached nearly 2000 students this year. Broadly, these efforts can be divided into 5 different categories: (a) library story activities addressing the National Chemistry Week theme, (b) assistance with "Take Your Children to Work Day," (c) helping Scouts earn their Science badges, (d) chemistry demonstrations to elementary school students, and (e) hosting a Science Olympiad for public elementary schools.

(7) YCC Events

The Delaware Section YCC arranged a number of activities aimed at engaging our student and young professional members. Examples of YCC activities include (a) Happy Hours every two weeks at a different location in New Castle County, Delaware, (b)

Winterthur museum Art restoration lab tour

(c) Chemistry of cooking demonstrations, (d) baseball events (e) activities and

involvement in the NCW Open House

demonstrations and Science Olympiad, (f) an Annual

ACS picnic, and (g) coordination with the Delaware

Valley Professional Chapter of the Alpha Chi

Sigma Professional Chemistry Fraternity.

(8) Award Programs for Academic, Professional, and Service Accomplishments.

The Delaware Section of the ACS completed another successful year recognizing members for their contributions to chemistry, leadership in research, teaching and Local Section activities and service. Presented the Delaware Section Award to Dr. Charles

McEwen, DuPont, for his contributions to mass spectrometry research. The Tillmans-Skolnik Award was

given to Dr. Allison Moore for her contributions to

Local Section activities and chemistry outreach

projects. The Carothers Award was presented

to Professor Richard DiMarchi, Indiana University

in recognition of his research Application of Chemical

Biotechnology to the Optimization of Endocrine

Hormones. In May, 2007 ACS president Dr. Catherine

Hunt was invited to award forty-two 50- and 60-year

members of ACS and recognized them with

membership certificates. At the Annual

Picnic, the Blunt Scholarship was awarded for academic

achievements at Delaware Technical Community

College. The highest scoring students in the Delaware

ACS state test were also awarded. The

outstanding junior student, Patrick J. Knerr, in

Chemistry at the University of Delaware was awarded

for his outstanding academic achievements. In

December, the Section recognized Patrick Carney, for

excellence in teaching chemistry in Delaware. The

Textbook award for the best high school chemistry

students in Delaware's 48 school were implemented for

the first time.

In summary, 2007 was a remarkable year for the

Delaware Section during which the Section executed a

great diversity of activities through the combined

efforts of many volunteers

C. Local Section and Chair Goals

2007 Goal Attainment. The Local Section Activities Committee strongly encourages local section planning.

As a result, the 2007 local section annual report should follow-up on the attainment of goals. Please list the goals you set at the beginning of your term for your section and yourself, and report on the attainment of the

1. goals.

a) **Local Section Goals and Assessment:**

1. Actively pursue networking opportunities for academic and industrial members to generate employment opportunities.
 - a. Initiate a networking meeting for at least one local company to actively pursue recruitment opportunities at the University of Delaware through presentations of the company profile and available opportunities.

- b. Continue publishing the local job postings on the Delaware Local Section web page.

- c. Promote "speed networking" during a monthly general meeting.

Assesment:

As described in the narrative, employees of AstraZeneca Pharmaceuticals was invited to the University of Delaware to present their research capabilities and discuss the careers for the students. This event was supported by AstraZeneca which enabled the students and faculty to attend this meeting for free. It was a great achievement to have had nearly 13 industrial participants ready to talk to the students and faculty.

Delaware ACS continued to publish the local job postings on the Delaware Local Section web page and the newsletter.

At each of the monthly meetings a specific time was designated to promote networking efforts among the attendees. Examples of how to introduce oneself was also shared at each of the meetings. This was an easy and cost-effective way of networking.

2. Increase the Section's local presence
 - a. Seek low-cost advertising opportunities to promote the section meetings and programs

- b. Seek low-cost event venues to hold section meetings and programs, such as Science Café.

- c. Strengthen ties to local chemistry institutions through joint events
 - i. University of Delaware Poster Session
 - ii. Annual Delaware State University Meeting in Dover
 - iii. Delaware History of Science Museum

- d. Network with elected officials who represent the State of Delaware in Washington, DC
 - i. Contact Congress Week - Feb 19th - 23rd.

Assesment:

The Delaware local Section meetings were advertised in company bulletin boards. Email list was efficiently utilized to promote the events. Newspapers were invited to write articles about the events such as the Carothers award and National Chemistry Week events.

Science Café grant was obtained. The first Science Café was held in September 24th, 2007 which attracted University of Delaware as well as University of Maryland students and various industry professionals. Though many events were held together with the University of Delaware, scheduling difficulty precluded joint events at Delaware State University. Events were held and the journalist were encourage to write about the efforts made by the Delaware History of Science Museum.

"Contact Congress Week" was successful as the local section members met Senator Carper and staff representatives for Senator Joe Biden and Congressman Mike Castle. Topics of discussion included support for R&D funding and science education, and the outsourcing of technical jobs to other countries. The Section was offered as a resource to each of the offices for science-related matters, and suggestions to involve the Senators and Congressman Castle in Section events were well received.

3. Utilize the electronic media to promote the section and its programs.

a. Utilize resources and tools made available through the ACS Web Presence Reinvention Project

b. Allocate budget funding for professional local web development.

Assesment:

A new user-friendly website was designed with the help of a fellow ACS member with the input from the executive committee. The launch of the new website will probably take place in 2008.

b) 2007 Chair's Goals and Assessment:

1. Promote events to enhance the true Multidisciplinary Nature of Chemistry

a. Organize at least 2 - 4 section monthly meetings that address the theme of "conservation sciences."

i. Catherine R. Matsen and Dr. W. Chris Petersen, Winterthur Museum of Delaware - Conservation Science: The Forensics of Cultural Material

ii. Dr. David L. Anton, DuPont - Presentation on biofuels and biofeedstocks.

iii. Professor Loyd Bastin, Widner University - Presentation on "Greener Chemistry in the Labs"

iv. Other programs TBA

Assessment:

Several events around the theme of "Conservation Sciences" were organized to address the current concerns for the energy crisis, alternative energy sources as well as related areas.

The first meeting was titled, "Conservation Science: The Forensics of Cultural Material." The presentation was given by Catherine R. Matsen and Dr. W. Chris Petersen from the Winterthur Museum. They captivated the audience by sharing the various techniques used

to discover the mysteries of the past to better understand cultural artifacts in the museum and how to preserve them for future generations to enjoy. The second event was the 14th Annual Earth Day celebration sponsored by the AstraZeneca Environmental Committee on April 19, 2007. The event included a total of nearly 30 exhibitors and was attended by nearly 1500 AstraZeneca employees. The third event was called "Towards the BioBased Economy", and a presentation was given by Dr. David L. Anton from DuPont. US President George W. Bush visited the Biofuels Research Labs at DuPont the day after he promised more funding for Biofuels during the State of the Union address in 2007. Many ACS members were curious to learn and discuss the future possibilities with Dr. Anton. In line with the Earth Day celebrations, a representative from the Delaware Dept of Natural Resources and Environmental Control (DNREC) also presented a poster on their work at this April meeting. The fourth event was titled, "Band Gap Engineering in Nanostructures for Optoelectronics and Photovoltaics" by Dr. Gabriela Stoleru from the University of Delaware who presented her research on future possibilities for alternate sources of energy. The fifth event was "Solar Electricity Generation: Crystalline and Thin Film Photovoltaics" by Dr. Robert W. Birkmire at the Institute of Energy Conversion, University of Delaware who presented the current situation of the Solar electricity generation and its future. The final event was held in December to address the "Photochemical Reactions in Natural Waters" by Dr. Kris McNeill of University of Minnesota.

Throughout the year, the members were encouraged to discuss various ways of conserving energy in homes, classrooms and offices. Ideas were also published in the Section newsletters to share with the members.

2. Increase involvement of the general public in the promotion of chemistry and the ACS.
 - a. Aggressively promote existing ACS programs to involve student communities
 - i. University of Delaware Poster session
 - ii. Annual Delaware State University Meeting in Dover
 - iii. National Chemistry Week
 - iv. Earth Day - Organize an event to promote Earth Day to a broader audience in Delaware.
3. Encourage and increase the involvement of the Executive Committee members to recruit successors for ACS leadership positions.

The Industry/Academia Poster Session was a success at the University of Delaware. Though we were not able to hold a meeting at the Delaware State University in Dover, we were successful in recruiting AstraZeneca Pharmaceutical (AZ) employees to discuss their research and to talk about career opportunities with University of Delaware students. National Chemistry Week was also a great success with

over 400 visitors and dozens of local companies and universities participating in the event. The bio-based fuels talk by Dr. David Anton from DuPont and the poster presentation by Dept of Natural Resources and Environmental Control (DNREC) enabled more members to be exposed to the alternative energy concepts and green chemistry. We were also very successful in finding new members for the executive committee. The elections were held on time to fill the vacant positions.

2008 Goals. (This section should be completed by the 2008 local section chair.) Please list below at least 2. three goals that you and your local section plan to accomplish during your term as local section chair.

a) 2008 Local Section Goals (Include at least three goals):

1. Increase section involvement with local universities, schools, and student communities.
 - i. Hold outreach events such as Science Café meetings on university campuses.
 - ii. Initiate section meetings on university campuses to encourage student and faculty participation.
 - iii. Continue joint events with local universities.
 - a. University of Delaware student/industry poster session
 - iv. Recognize and reward outstanding high school chemistry students with book awards.
2. Raise awareness of the importance of chemistry in the general public.
 - i. Support efforts of the Delaware Academy of Chemical Sciences to preserve chemical heritage in Delaware
 - a. Three Legends Luncheon
 - ii. Network with elected officials who represent the State of Delaware in Washington, DC
 - a. Contact Congress Week Feb 18th - 22nd.
3. Organize relevant social events to promote networking and attract/retain younger section members.
 - i. Promote Younger Chemists Committee (YCC) events to involve younger members
 - a. YCC Newsletter
 - b. Networking Socials

b) 2008 Chair's Goals:

1. Promote events to emphasize the societal relevance of chemistry
 - i. Organize at least 2 - 4 section monthly meetings that address the theme of "science and society"
 - a. Dr. David Caudill, Villanova University School of Law - Presentation on science in the courtroom
 - b. Dr. Alex Bradley, DuPont - Presentation on science in the State Department
 - c. Dr. Robert Giegengack, University of Pennsylvania - Presentation on climate change controversies
2. Broaden participation in section events by

utilizing new and diverse meeting formats and meeting venues

- i. Organize plant/brewery tours to allow members to see chemistry in action
 - ii. Initiate section meetings at fresh and attractive venues, including new restaurants and popular local sites
 - iii. Support family-friendly events to attract members with young children
 - a. National Chemistry Week
3. Increase the involvement and participation of executive committee members in local section meetings, to set an example for other section members and encourage successors to leadership positions

D. Suggestions/Concerns

List any suggestions you have for the Local Section Activities Committee (LSAC). How can LSAC specifically help your section?