

American Chemical Society

Form: Part II - Annual Narrative Report
 Organization: North Carolina
 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: NC-ACS at the NC-State Fair

We again participated in the Our Land, Our Legacy exhibit at the 2007 North Carolina State Fair held from October 12 - 22. Although the dates missed including National Mole Day by one day, the event was among the most successful in our sections long history with the NC State Fair. We had 50 different volunteers who worked 4.5 hour shifts for the 10 days of the fair. Two of the volunteers were a 7th grader and his father from Sampson County who claim that they have never have missed our exhibit at the State Fair. With credentials like that, how could we pass up the chance to make them honorary ACS volunteers for a day?;they worked one of the shifts. The father says that the family has a hard time taking the NC-ACS State Fair shirt off of his son long enough to wash it. The exhibit attracted over 112,000 visitors which was a 14 % increase from last year and was 13.5 % of the visitors to the fair. The NC Section did 44 hour-long stage shows on the states of matter which accounted for over 56% of all of the stage shows. As part of the exhibit, we participated in a scavenger hunt. Visitor are required to answer a question that is asked at each booth. We gave away 23,000 t-shirts as part of this activity. The stage shows were highlighted by demonstrations of the properties of all four states of matter. Our booth exhibit again helped younger kids made coffee filter butterflies. The Section again looks forward to participating in the State Fair in 2008.

Description
 (Please limit to
 b) one paragraph):

c) This activity was new in 2007

Activity #2

a) Title: National Chemistry Week

Description
 National Chemistry Week (NCW) was celebrated with a day of educational activities at the NC Museum of Natural Sciences. The 2,687 visitors were engaged by chemistry stage shows and hands-on experiments related to the 2007 theme, "The Many Faces of Chemistry". NCW Coordinator, Dr. Meredith Storms (UNC Pembroke), led the collaboration between NC-ACS and the museum staff. She and her team of volunteers received many positive comments from the attendees. The NCW program was the 2nd highest drawing event at

(Please limit
b) to one paragraph): the museum in 2007 (after "Bugfest"), which demonstrates the ongoing popularity of this event.

c) This activity was new in 2007

Activity #3

a) Title: Project SEED

The 2007 (17th) edition of this program was highlighted by the expansion of this program from a local commuter program to a statewide residential and commuter program. The residential students were housed at Duke University through the Duke Youth Programs. We had the highest number of applicants ever, with over 200 applicants for 30 spaces. Each applicant was interviewed and our final selections were made. Of the students selected, three were ranked number one in their class and 90% were ranked in the top 15% of their class.

Over the past 16 years, the NC-ACS Project SEED program has served approximately 100 students with 96 percent attending college (100 percent over the last five years), 83 percent majoring in science or mathematics, 67 percent in chemistry, and 75 percent overall receiving full or partial scholarships. The average SAT score among current participants has been around 1200(Verbal and Math). The NC-ACS Project SEED program has more underrepresented minorities as national winners than any program in the state and very possibly the country. Over the past five years, our students have placed and won in 36 national awards in science competitions including eight Siemens Westinghouse National Semifinalists and two Sigma Xi National First Place Winners. Our student participants have matriculated to in-state institutions such as North Carolina State University, University of North Carolina at Chapel Hill, Wake Forest University, North Carolina Central University, Winston-Salem State University, East Carolina State University, University of North Carolina at Greensboro, and North Carolina A & T State University. Out of state institutions include MIT, Stanford, Dartmouth, Princeton, University of Florida, University of Miami, Hampton University, Howard University, Morehouse, Virginia Tech, and the University of Maryland-Baltimore County. Among our program alumni we currently have nine students in doctoral programs and a Phi Beta Kappa member. We have a demonstrated model that works in moving gifted students into the sciences.

Description
(Please limit
b) to one paragraph): See <http://www.NCProjectSEED.org>.

c) This activity was new in 2007

Activity #4

a) Title: NC-ACS Section Conference

The North Carolina Section ("NC-ACS") held a Local Section Meeting on April 21, 2007 in the French Family Science Center at Duke University, with an estimated overall attendance of about one hundred and

twenty-five guests including the presenters. The program included oral and poster presentation sessions between 8:00 am and 11:40 am, a presentation of entertaining science demonstrations between 11:40 am and Noon, the Section's Annual Distinguished Speaker Lecture between Noon and 1:10 pm, and a catered bar-b-cue buffet lunch between 1:15 pm and 2:30 pm.

The oral sessions included forty-five lectures concurrently presented in five meeting rooms focused in areas of analytical, inorganic, organic/polymer, and physical chemistry, biochemistry, and chemical education. The poster sessions included twenty-five poster presentations focused in the same technical areas, with the authors present to answer questions.

The Distinguished Lecture Award was presented to Dr. Alan Tonelli of the Fiber and Polymer Science Program at North Carolina State University, who delivered the keynote lecture on "Polymers from the Inside Out". Dr. Tonelli also moderated award ceremonies before presenting the keynote lecture, including recognition of the 2006 NC-ACS Barbara Whittaker Awardee, Yekaterina Torres. Dr. Tonelli also recognized the 2006 NC-ACS Undergraduate Research Scholarship Awardees, including: Arnav Mehta of Duke University; Katherine Fraley of North Carolina State University; Drew Schwartz of Duke University; and Yuting Fan of Duke University.

The science demonstrations were presented by Dr. Kenneth Lyle of Duke University.

The Women Chemists Committee that was established by NC-ACS in 2007 held a continental breakfast and open meeting at the beginning of the Local Section Meeting that was attended by about 20 women chemists.

Description
(Please limit
b) to one paragraph):

c) This activity was new in 2007

Activity #5

a) Title NC-ACS Undergraduate Scholarships

There were two ACS Undergraduate Scholarships awards for the 2007-2008 school year. The Executive Scholarship Committee selected each of the following outstanding students from a competitive pool of 15 total applicants currently attending Duke University, North Carolina State University, or University of North Carolina at Chapel Hill. Each student was encouraged to present their work at both the NC-ACS Local Section Conference and the Regional (SERMACS) or National ACS meetings to be held during the 2007-2008 school year. During 2007, the Scholarship Committee with approval of the NC-ACS Executive Committee agreed to award scholarships at two different times (one in the spring and one during the fall semester).

The 2007 Spring Scholarship Recipients Included: Jason Robert Brown, Duke University - Advisor, Dr. Boris Akhremitchev- selected to receive a \$2000 NC-ACS Award: Jason intends to pursue a M.D./Ph.D. degree in order to one day conduct neurology research at a major university research hospital. Currently, Jason is utilizing Atomic Force Microscopy to better

understand hydrophobic interactions with proteins and how protein folding relates to neurological pathology. Jason will use scholarship funds to purchase AFM tips and reagents necessary for tip surface modifications, as well as new polymers used to test phase separation of hydrophobic molecules.

Zhouhui Joe He, NC State University - Advisor, Dr. Melissa Pasquinelli - selected to receive a \$2000 NC-ACS Award: Zhouhui aspires to attend either Pharmacy School or a Ph.D. degree in the chemical sciences. As a double major in biochemistry and chemical engineering, Zhouhui routinely uses molecular dynamics simulations to calculate ligand/receptor binding events for use in nanobiosensor applications. Currently, Zhouhui is studying liposome-based nanobiosensors used to detect activity of acetylcholinesterase activity. Zhouhui intends to purchase molecular modeling software, reference books, and to attend a national conference to present this work.

The 2006 Scholarship winners met for a dinner and networking session held at the Red Room in Raleigh, NC. The event provided an opportunity for the students, their professors, and members of the NC-ACS scholarship board and executive committee members to meet each other and enjoy a fun evening socializing with fellow chemists.

Description
(Please limit

b) to one paragraph):

c) This activity was new in 2007

Activity #6

a) Title: Contemporary Science Center

On Feb. 7, Pamela Blizzard, Director of the Contemporary Science Center (CSC), and Eric Grunden from Enloe HS, came to speak about their joint venture with the NC-ACS and Amphora Pharmaceuticals to develop a hands-on lesson for chemistry high school students based on electrophoresis. The activity was analyzed by both students and teachers, and is intended to be affective rather than cognitive. The new chemistry program is an important addition to existing lessons for biology, physics, and advanced math.

This NC-ACS funded chemistry project was kicked-off in April with 20 honors students from Broughton HS.

Description
(Please limit

b) to one paragraph):

More information about the Contemporary Science Center can be obtained from their website, <http://www.contemporarysciencecenter.org>.

c) This activity was new in 2007

Activity #7

a) Title: Technical Discussion Groups

NMR Discussion Group (TriMR, NMRDG):
The officers include Thomas O Connell, president, and Hanna Gracz, treasurer. This discussion group activity was low this year. They sponsored the NMR session at the April Local Sectional Meeting. There

were four speakers and eight attendees. The treasury is quite low. As of November 1, the balance was \$181.63, with a \$11 monthly maintenance fee. The treasurer applied for an account change but was told they would have to supply something beyond a tax ID. They expect to have a planning meeting in December 2007 or January 2008 to jumpstart 2008 activities and their budget.

Polymer Discussion Group (PDG):
Chair is Dr. Russell E. Gorga, Textile Engineering, NCSU, who is also the secretary. The treasurer is Tim Fornes of Lord Corporation. The group met in January, May, and November. The first and last of these were meetings with guest speakers. The May meeting was the Richard D. Gilbert Award Symposium at North Carolina State University; awards, funded by Lord Corporation, were awarded for student presentations. The winners of these awards were: First: Ravi Shankar, NCSU; Second: Arif Gozen, NCSU; Third: Jinmei Du, NCSU; Poster prize: Young Jhon, NCSU.

Triangle Area Mass Spec (TAMS):
Three members coordinated events in 2007: Michael Goshe (NC State), Jon Williams (GSK), and Michael Fitzgerald. Five meetings featuring visiting speakers were held, with attendance averaging about fifty. A Vendor's Night was held in November, with sixteen vendors and about eighty attendees. The Group also alerted members to the large number of events held by their sponsors during the year. The membership of TAMS is above 150.

Triangle Chromatography Discussion Group (TCDG)
The officers of TCDG are: Adam Davis, President; Sherry Gregory, Past President; Steve Cooper, President-Elect; Joe Hudson, Secretary; and James Blake, Treasurer. There are at present seven other members of the committee, which meets once a month. During the year, the Discussion Group lost one of its most important supporting members, Howie James. The major event each year is the Chromatography Instrument Exhibit and Symposium in May. The 2007 program was at North Carolina State University, with approximately 250 in attendance. There were six keynote speakers, and also exhibits and presentations by vendors. A student poster session was held with prizes for the best three papers. The TCDG Exhibit and Symposium will celebrate its 25th anniversary in 2008.

The TCDG also contributes to the North Carolina Section's scholarship fund. In 2007 two awards of \$2000 undergraduate scholarships were made. The winners were: Jason Robert Brown, Duke University; Zhouhui Joe He, North Carolina State University. Workshops with short courses are held every year on a chromatographic technique. The nominal fee for these workshops supports the NC-ACS undergraduate scholarship fund. Each attendee also receives a certificate of workshop attendance

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

c) This activity was new in 2007

Activity #8

a) Title: Chemistry Olympiad

The 2007 Chemistry Olympiad local exam request for participation was sent to 150 high schools in our section and 15 schools participated. Three hundred and fifty students took the local exam and 15 students advanced to the National exam. The National exam including lab practical was administered and one student made high honors. Sarah Allen was the coordinator for this past year, but has resigned in that role. Myra Halpin will return to administering the Olympiad and has mailed 150 schools invitations to participate.

Description:

(Please limit to

b) one paragraph):

c) This activity was new in 2007

Activity #9

a) Title: ACS Tour Speakers

As part of our ACS Speakers Series, we participated in a Science-Café in cooperation with Sigma Xi. On 16-Jan-2007 about 50 attendees (science/chemistry-types and general public) enjoyed University of Montana Prof. Richard Field's informal discussion of "Chaos in Nature" and engaged in a lively discussion, all in the friendly confines of the Helios Coffee House in Raleigh. This event was made possible by an ACS Science Cafe Mini-Grant. Similar Science-Cafés are scheduled for 2008.

Robert Bates "Chemistry of Brewing" spoke at NCSU on 20-Feb-2007. He was hosted by Phil Brown and the NCSU ACS Student Affiliates group.

Peter Lantos presented "Consulting 101" on 20-Mar-2007 at the Sigma Xi Headquarters.

Description:

(Please limit to

b) one paragraph):

Stanley Manahan presented "Greening of Environmental Chemistry" on 23-Oct-2007 at NCSU. The event was co-hosted by NC State ACS Student Affiliates Chapter.

c) This activity was new in 2007

Activity #10

a) Title: 2012 SERMACS Bid

Sub-committee met recently to discuss the potential. Members: Ken Tomer, Jay Brown, Charlie Goss, Mark ter Horst, and Al Tonelli. All sub-committee members agreed to put in a bid. Call for participation on the organizing committee will be posted on the listserve and website. Sub-committee talked about potential location; maybe one of the hotels in RTP? Chair of SERM told Sol Levine that he is willing to have a teleconference to vote on our bid. Committee discussed how to get some new people involved in the planning of the event. Sol Levine said that 19 people last time were new volunteers. Motion by Charlie Goss to continue the bid solicitation.

Description:

(Please limit to

b) one paragraph): Unanimously passed.

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.

Due to the efforts of our Executive Comm. and many additional volunteers, 2007 was an interesting and productive year. Below are some of the highlights of this past year's activities.

The TarHelium newsletter is fully electronic and able to provide expanded coverage of our activities, thanks to Nicolle Tulve.

Our web-site has been completely overhauled and upgraded with links to many other sites of interest to Chemists and the general public, thanks to Melinda Box.

The recently formed WCC (Women Chemists Comm.) has been actively functioning and is beginning to interest and draw women Chemists, including graduate students, into our section activities, thanks to Lisa Milstein, Laura Sremaniak, and Melissa Pasquinelli.

Once again thousands of people (over 100,000) had an opportunity to visit our Booth, observe our Stage Shows, and see demonstrations that emphasized the importance and fun of Chemistry, while attending the NC-State Fair. Bill Switzer and his volunteer army deserve thanks for the splendid presence of NC-ACS at the NC-State Fair.

Hundreds of children, youth, and parents (over 2500) were entertained and learned about the important place Chemistry plays in our lives at the NC-Museum of Natural Sciences, as part of national Chemistry Week activities. Once again, Meredith Storms, her volunteers, and the Museum Staff did a wonderful job raising the public's awareness and appreciation for chemistry and chemists.

As part of our ACS Speakers Series, we participated in a Science-Café in cooperation with Sigma Xi. On 16-Jan-2007 about 50 attendees (science/chemistry-types and general public) enjoyed University of Montana Prof. Richard Field's informal discussion of "Chaos in Nature" and engaged in a lively discussion, all in the friendly confines of the Helios Coffee House in Raleigh. This event was made possible by an ACS Science Cafe Mini-Grant. Similar Science-Cafés are scheduled for 2008.

Under the expert guidance of Ken Cutler and with the financial support of the Welcome Foundation,

our Project SEED summer program for economically disadvantaged high school students was significantly expanded. 30 SEED students, including 10 from outside the Triangle area who lived on the Duke Campus, spent 10 weeks working in Duke, UNC-CH, and NC-State labs. under faculty mentorship and also received educational support from the NC Project SEED Staff. As has always been the case, many of the NC-SEED students successfully applied for admission to colleges and universities and for scholarships, thus increasing the diversity of our pool of future Chemists, Scientists, and Engineers.

In a joint venture with the Contemporary Science Center, CSC, a "hands-on" lesson for chemistry high school students based on electrophoresis was developed with Amphora Pharmaceuticals. The activity will be analyzed by both students and teachers, and is intended to be affective rather than cognitive. Similar programs already exist for biology, physics, and advanced math. The NC-ACS funded CSC chemistry project was kicked-off in April with 20 honors students from Broughton HS. More information about the Contemporary Science Center can be obtained from their website, <http://www.contemporarysciencecenter.org>.

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. Ensure that ProjectSEED meets the goals outlined in its Grant from Burroughs Wellcome Fund and seeks continued funding. Have successfully met the first, but have yet to secure additional funding.
2. Complete the Contemporary Science Center program and introduce it into High Schools. This has been done.
3. Implement Internet Conferencing and Science Cafes. Internet conferencing is in progress, but has not been fully implemented. We met our Science Cafe objectives.

b) 2007 Chair's Goals and Assessment:

1. Maintain our outreach activities at their current high level. This has been achieved.
2. Help to get the new expanded, state-wide, residential version of the NC-ACS Project SEED (funded by a \$1.3M Burroughs Wellcome Fund grant) off to a successful start. This was mainly achieved, though not without some first-

year difficulties. We are on target to have 50 (20 residential) SEED students in 2008.

3. Substantially increase graduate and undergraduate student participation (talks and posters) at our annual Local Section meeting in April. This was not attained, and so we have reorganized the format for our 2008 meeting (See 2008 Goals)
4. Increase participation in our ACS Tour Speakers meetings. This was achieved for the 2 meetings hosted by our student affiliate group at NC-State and in the Science Café, but did not work for the more traditional meeting held at Sigma Xi.

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. Achieve expansion of our residential and expanded services SEED Program to 30 commuting and 20 residential students. Also obtain additional funding, so we may continue after the initial funding from Burroughs Wellcome is depleted after the 2011 SEED Program.
2. Modify the format of our section Conference to maximize participation by students (undergrad and graduate) and other NC-ACS members.
3. Revive YCC and SCC and expand WCC activities.
4. Bid on and obtain the 2012 SERMACS Meeting for our section.
5. Re-activate Committee on Investments, define monetary goal for investment of funds in 2008, and place those investments.
6. Clarify spring / fall scholarship application/ award process, including application requirements and deadlines, timely communication to universities of the program plan and standards for a complete application, and restrictions on purposes and deadlines for expenditure of scholarship award money; drive a 25% increase of total applicants compared with 2007.
7. EC marketing/advertising member responsible for assisting in meeting attendance goals for spring/fall Section meetings; and driving a 100% increase in advertising revenue compared with 2007.
8. Develop or support existing activities that enhance our local Chemistry enterprise with funding from any budget surplus.

b) 2008 Chair's Goals:

1. Organize 3/18/08 NC-ACS March Evening Meeting and achieve Combined attendance of 25+ students and NC-ACS members.

2. Assist Chair-elect in organizing fall NC-ACS Evening Meeting including Distinguished Speaker, and assist achieving combined attendance of 25+ students and NC-ACS members.
3. Establish an Executive Committee position responsible for Marketing of NC-ACS membership and section activities, and for pursuing advertising revenue to fund Section programs. (See metrics below.)
4. Together with past Chair, Chair-elect, and others, drive a 25% increase compared with 2007 in collective applicants for Ex. Comm. elected positions in the November 2008 election.

D. Suggestions/Concerns

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