



The TarHelium

Volume 23, Number 5

January 1993

**NC Local Section and the Polymer
Discussion Group Meeting
Thursday, January 14, 1993
North Carolina State University Faculty Club
David A. Tirrell
University of Massachusetts, Amherst
"Genetically Engineered Polymers"**

5:30 p. m. Social Hour

6:30 p. m. Dinner[†] (members/guests: \$15; students/high school teachers \$7.50)

7:30 p. m. Lecture (biography of the speaker p. 2)

[†]Please make reservations no later than 5:00 p. m., Monday, January 11. You may make or cancel reservations at the following locations: In Chapel Hill call Becky Smith, 962-2172; in Durham, Bonnie Turner, 660-1506; in Raleigh, Joyce Dunn, 515-2545; in Fayetteville, Sandra Smith, 486-1571; or by e-mail at Internet: bill_switzer@ncsu.edu

**Calls for Papers: 107th NC Section Conference-p. 5
10th Annual TCDG Symposium and
Instrument Exhibit (TCDG)-p. 4**

**Triangle Chromatography Discussion and NC
Pharmaceutical Discussion Groups**

**Thursday, January 28, 1993
North Carolina State University Faculty Club
Daniel W. Armstrong
University of Missouri, Rolla**

**"Enantioselective Separation of Biologically Important
Molecules and the Determination of Trace Enantiomeric
Impurities"**

A buffet dinner (cost \$12) will be served at 6:30 p. m. and the presentation (no cost) will be at 7:30 p. m. Reservations must be made for dinner before noon, Tuesday, January 26 by calling: Cathy Maloney (NCPDG) at 544-3900 or John Hines (TCDG) at 541-6647. An abstract of the lecture is given on p. 2.

The TarHelium
c/o William L. Switzer, Editor
Department of Chemistry-8204
North Carolina State University
Raleigh NC 27695-8204

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The TarHelium is a publication of the North Carolina Section of the American Chemical Society. The views expressed herein are not necessarily those of the Section.

W. L. Switzer, Editor and Advertising Manager
S. T. Purrington, Assistant Editor

Send contributions for *The TarHelium* to the Editor, Chemistry-8204, North Carolina State University, Raleigh NC 27695-8204. E-mail *via* Internet (preferred): bill_switzer@ncsu.edu. Phone: (919) 515-2945. FAX: (919) 515-5079.

Donations to the NC Section of the ACS help sustain Local Section activities. All contributions are tax deductible and greatly appreciated.

From the Past Chairman:

1992 has been a great year for the NC section of the ACS. We have made some substantial improvements in *The TarHelium* and will continue to make sure that this vital communication link remains at a high quality. This year we increased our support for the undergraduate scholarship program and continued the ACS project SEED program. We are planning to enhance our support for the SEED program so that we can sponsor at least 12 high school students next summer. We will be calling on our membership to help us in this venture. Our Section Conference at UNC-CH, the Mass Spectrometry Symposium at Duke and the National Chemistry Day at NCSU organized by our High School committee were all well attended and were great successes. Thanks to all who helped with these projects and programs.

For some years the attendance at our monthly Section meetings has not been consistently at a level that warrants our support for their continuation. In 1993 we will discontinue some of these monthly meetings and work more closely with the discussion groups to help them promote their plans for membership involvement. Bob Morrison, the 1993 Chair, will give you more details about the Section's plans for 1993.

We have one of the fastest growing sections with a membership that has increased to over 2000 which has given us an additional councilor and alternate councilor. The executive committee has worked hard on your behalf and as always wants to involve more members in our Section programs and activities. A list of the Executive Committee members is printed on the last page of each *TarHelium*; so give one of them a call and find out where you might participate. My thanks to all who have helped during 1992; have a great 1993.

--Charles G. Moreland, 1992 Chair

1992 Chair's Awards Given

North Carolina Section Chair, Charlie Moreland, presented his Chairman's Awards to Joan Bursey and Bill Switzer for their outstanding contributions to ACS section activities during this past year. Charlie noted Joan's continuing role as treasurer; a job that she performs in an up to date and efficient manner. He also pointed out her willingness to facilitate many section projects such as Project SEED, our scholarship program, the section conference and monthly meetings. Charlie's recognition of Bill was for the super job Bill has done as editor of *The TarHelium* this year. Charlie pointed out that the improvements made in our Section newsletter have made it an informative and timely communication link between our officers and members. An effective newsletter facilitates almost all our Section activities.

ACS and Polymer Groups Meet Jointly

The regular monthly meeting of the Local Section will be held jointly with the ACS Polymer Group at the NCSU Faculty Club on Thursday, January 14. The Faculty Club is located at the intersection of I 440 (the Raleigh beltline) and Hillsborough Street between Meredith College and the NC State Fairgrounds.

The speaker is Dr. David A. Tirrell, Professor of Chemistry at the University of Massachusetts, Amherst. Dr. Tirrell received his S. B. from MIT and both his M. S. and Ph. D. degrees from the University of Massachusetts. He was a research associate at Kyoto University in Japan before returning to the University of Massachusetts.

TCDG-NCPDG Meet Jointly in January

The Triangle Chromatography Discussion Group (TCDG) and the North Carolina Pharmaceutical Discussion Group (NCPDG) will co-sponsor a presentation on the chiral analysis of pharmaceuticals by Dr. Daniel W. Armstrong, Department of Chemistry, University of Missouri, Rolla. The presentation will be given on Thursday, January 28, 1993 at the NCSU Faculty Club (see directions for the ACS and Polymer Group joint meeting above.) A buffet dinner will be served at 6:30 p. m. and the presentation will be held at 7:30 p. m. Reservations MUST be made for dinner BY noon, Tuesday, January 28: Cathy Maloney (NCPDG) at 544-3900 or John Hines (TCDG) at 541-6647.

ABSTRACT: New derivatized cyclodextrins have greatly expanded the number and types of enantiomers that can be resolved. In LC, derivatized cyclodextrins can be used in the reversed phase methanol, glacial acetic acid and/or triethylamine. Usually different enantiomers are separated in each mode. Some of the newer columns and separation modes produce highly efficient and selective separations. Separations will be shown where 0.0001% of one enantiomer can be detected in the presence of 99.9999% of the other. The new derivatized cyclodextrin GC columns resolve a variety of enantiomeric solutes that are difficult to do by LC (particularly the smaller, more volatile aliphatic analytes). New wall-bonded cyclodextrin capillary columns can be used in capillary electrophoresis (CE) and supercritical fluid chromatography (SFC) as well. This talk will focus on the use of these new stationary phases for chiral separations.

TCDG Plans March Short Course

The Triangle Chromatography Discussion Group (TCDG) will sponsor a 2-day capillary GC short course taught by Dr. Walt Jennings J&W Scientific on March 2-3, 1993.

PLACE: NCSU Chemistry Department
Room 124, Dabney Hall

DATE: March 2 & 3, 1993 (all day both days)

BY: Dr. Walter Jennings et al.

COST: \$190 non-ACS members
\$160 ACS members
\$80 students

For additional information, interested people can contact Drake Dowler at (919) 282-5836.

January Calendar

- Jan 11 A. Tonelli, North Carolina State University, "Conformation: The Connection between NMR Spectra and Microstructures of Polymers", NCSU
- Jan 14 D. Tirrell, University of Massachusetts, Amherst, "Genetically Engineered Polymers", *Polymer* and ACS
- Jan 15 K. Suslick, University of Illinois, "The Chemical Effects of Ultrasound", Duke
- Jan 17 K. R. Yamamoto, University of California, San Francisco, "From Simple Signal to Complex Control: Transcriptional Regulation by Glucocorticoids", 17th Annual Matrone Lecture and Banquet, 3712 Bostian Hall, call 515-5802 for information, NCSU-BC
- Jan 20 C. Friend, Harvard University, "Structural and Mechanistic Surface Chemistry", NCSU
- Jan 22 T. Meyer, University of North Carolina, Chapel Hill, "Chemical Approaches to Artificial Photosynthesis", Duke
- Jan 25 F. Richardson, University of Virginia, "Circularly Polarized Luminescence Spectroscopy as a Probe of Chiral Structure and Dynamics in Metal Complexes", NCSU
- Jan 25 R. G. Cooks, Purdue University, "Ion/Surface Collisions and What They Can Teach Us about Chemistry", noon, UNC-CH
- Jan 28 D. W. Armstrong, University of Missouri, Rolla, "Enantioselective Separation of Biologically Important Molecules and the Determination of Trace Enantiomeric Impurities", TCDG
- Jan 29 K. D. Straub, University of Arkansas, "Picosecond Spectroscopy of Hemoproteins and Iron Porphyrins", Duke

ACS-American Chemical Society monthly meeting

Polymer-ACS Polymer Discussion Group

TCDG-Triangle Chromatography Discussion Group

Duke (Chemistry) seminars at 3:30 p.m. Call Bonnie Turner at 660-1506 for information.

NCSU (Chemistry) seminars at 3:30 p.m. Call Joyce Weather-
spoon at 515-2548 for information.

NCSU-BC (Biochemistry) seminars at 4:00 p.m. Call Pat Sul-
livan 515-2581 for information.

UNC-CH (Chemistry) seminars as noted. Call Becky Smith at
962-2172 for information.

Factoid: In its 1992 Calendars, *The TarHelium* reported 109 different seminars, symposia, colloquia, etc.

HS Committee Publishes Newsletter

In November, the High School Committee of the Local Section of the ACS published its first newsletter of the 1992-93 academic year. Some of the news items have previously been published in *The TarHelium*, but summaries of several others that might be of interest are given below. If you can encourage teachers to participate in any of these program, please do so. Addresses for most programs described are given below, but you can always contact *The TarHelium* Editor to seek help in directing any requests. Thanks to Editor, Larry Knecht of the North Carolina School of Science and Math (NCSSM) for providing the information below.

Professional Development Awards for HS Chemistry Teachers:

The NC Section of the ACS is again offering two \$500 Professional Development Awards aimed at assisting high school chemistry teachers who wish to improve their professional skills. Teachers are invited to submit a proposal on forms available from the Committee [address given below]. The funds may be used to help defray costs of courses or workshop tuition, travel expenses to attend professional meetings, research projects, etc. Proposals will be reviewed by a committee of the NC Section ACS members and awards will be presented at the NC Section Conference on April 24, 1993. Awardees will be asked to report on the benefits of their professional development activity at the Section Conference a year later. **Eligibility:** Applicants must teach within the counties served by the NC Section. Counties within the Section include: Bladen, Caswell, Chatham, Cumberland, Durham, Edgecombe, Franklin, Granville, Halifax, Harnett, Hoke, Johnston, Lee, Martin, Moore, Nash, Northampton, Orange, Person, Randolph, Robeson, Sampson, Scotland, Wake, Warren and Vance. Counties that are served by the Section but that are not within the Section are: Bertie, Brunswick, Camden, Chowan, Columbus, Currituck, Dare, Gates Hertford, Hyde, Pasquotank, Perquimans, Tyrell and Washington. **Qualifications:** Applicants must have taught at least one chemistry class for at least one year and be scheduled to teach at least one chemistry class next year. The form is brief (one page) and must be signed by the principal. **Deadline:** March 5, 1993. **Address:** Dr. Sarah Allen, NCSSM, 1219 Broad St., Durham NC 27705.

National and International Chemistry Olympiads: The NC Section will participate again in the US National Chemistry Olympiad (USNCO). The goals of this program are to stimulate interest and achievement in chemistry among high school students throughout the US and to provide recognition of outstanding chemistry students, teachers and schools. Students competing in the USNCO are eligible to be selected as members of the US team for the International Chemistry Olympiad (ICO). This year the ICO will be held in Perugia, Italy, July 11-22. [CNN covered the 1992 competition and probably will cover it again in 1993.] Selection of the 4-member US team begins at the local school system level. It is the responsibility of the NC Section to nominate about 10 students in this area to take the NCO Exam. To select those students we will conduct a preliminary screening of students through a competitive test which will be provided and graded by the HS Committee, but administered by a teacher at the student's home school. Although the Local Section competitive test is not given until early March, it is not too early for students to begin preparing. Copies of previous exams with answer keys are available to help students prepare. To receive this information, teachers should contact Dr. Larry A.

Knecht, USNCO Coordinator, NCSSM, 1219 Broad St., Durham NC 27705 or phone (919) 286-3366 X229.

North Carolina and National Science Olympiad Plans for 1993 include seven regional tournaments and the state tournament. Regional tournaments will be held in Morganton, Garner, Fayetteville, Charlotte, Kenansville, Murfreesboro and Greensboro. They are scheduled from late January to early March of 1993. The state tournament will be held March 27 in Greensboro on the Dudley High School campus. Based on the results of regional tournaments, selected schools are invited to participate in the state tournament. The outstanding middle school-junior high team and the outstanding senior high team are invited to participate in the national tournament, which will be held May 21-22, 1993 at the University of Southern Colorado in Pueblo. For information call or write Manley Midgett, NC Science and Math Alliance, 410 Oberlin Rd, Suite 306, Raleigh NC 27605; (919) 733-9988.

Affiliate Membership in the NC Section and the Division of Chemical Education of the ACS The NC Section will pay the \$8 annual dues for any high school chemistry teacher wanting to join the Division of Chemical Education (DivCHED) of the national ACS. The 5000-member DivCHED has an outstanding newsletter that addresses concerns of chemistry teachers. Membership offers a variety of opportunities to collaborate with colleagues, to contribute to specific programs that enhance the teaching of chemistry, etc. At the same time we would like to offer complementary subscriptions to *The TarHelium* in which we publish many items of interest to local chemists and chemistry educators. For information and application forms, contact Dr. Linda Stroud, 2808 Rue Sans Famille, Raleigh NC 27608.

North Carolina Alliance of Chemistry Teachers The NCACT is a statewide organization of chemistry teachers consisting of a network of regional groups. It is supported financially by the various local sections of the ACS within North Carolina and membership is free. Its purpose is to promote communication between chemistry teachers within reasonably small geographic regions. Contact Nancy Wynn, State Coordinator, Rose Hill High School, Elm Street, Greenville NC 27834.

Rural Science Initiative Program at NC School of Science and Math A program has been established for rural high schools to help make laboratory investigation and student projects a central part of the science learning experience. With funding from the Kathleen Price and Joseph M. Bryan Foundation, the NC School of Science and Math (NCSSM) is offering an opportunity to science teachers and their students to participate in the program. Teacher-student pairs will come to the NCSSM campus for a intensive summer workshop on inquiry-based laboratory activities and student projects. The students will start projects to be completed in their home schools. Other features of the program include a follow-up workshop, stipends for teachers and students, and a \$1000 equipment/supply grant to support student projects and lab investigations. For more information or an application packet, please write Carol Royals, Math & Science Center for Research, NCSSM, 1219 Broad St. Durham NC 27705.

North Carolina Student Academy of Science The NC Student Academy of Science is an organization for students in grades 6-12 interested in science and scientific research. The Academy sponsors regional and state meetings where students learn about new research and have opportunities to share the results of their research and compete for recognition and awards, including cash prizes and special trips. Regional meetings and student competi-

tions are usually held in March. Winners in the regional project competition are eligible to enter the state competition. The state meeting and project competition is planned for April 23-24, 1993. Most students affiliate with the Student Academy through the science club in their school, but individual members may also join the Academy. For more information contact Myra Halpin, Executive Director, NC Student Academy of Science, NCSSM, 1219 Broad St., Durham, NC; 27705 (919) 286-3366.

Pre-high School Science-ACS "PACTS" Mini-grants "PACTS" (Parents and Children for Terrific Science) arose as a result of a 1986 conference for ACS members and representatives from 11 family science projects across the country. Two of the recommendations of the conference committee were: 1) the formation of a mini-grant program to support family science projects and 2) the publication of *WonderScience* magazine for adult/child science investigator teams. [See the December issue (Vol. 23, No. 4) of *The TarHelium* about the Burroughs Wellcome grant to the NC ACS to give 770 copies of *WonderScience* to elementary schools in Chatham, Durham, Orange and Wake Counties.] PACTS mini-grants are administered through the Pre-high School Office at ACS. Proposals for family science projects may be submitted between January 15 and March 31. Grants are awarded in amounts up to \$1200 per proposal. For information contact Dr. Ann E. Benbow, Pre-high School Science Office-ACS, 1155 Sixteenth St. NW, Washington DC 20036.

CALL FOR PAPERS

10th Annual TCDG Symposium and Instrument Exhibit

The Triangle Chromatography Discussion Group (TCDG) will hold its 10th Annual Exhibit, Symposium and Poster Session at the McKimmon Center in Raleigh on Thursday, May 27, 1993. As part of this meeting, the Group will sponsor a poster session. Anyone is invited to participate in the poster session, but for student posters only, prizes will be given. The first prize is \$400 and second prize is \$200. Deadline for receipt of abstracts is Monday, March 1, 1993. The abstract should be no longer than one page. Send the abstract along with title, authors, affiliation and complete address and phone number to:

Dr. Joe Hudson, Poster Chair
TCDG
P. O. Box 12242
Research Triangle Park NC 27709

Acceptance will be acknowledged no later than the end of March.

107th NC Section Conference in April

The 107th Conference of the North Carolina Section is planned for Saturday, April 24, 1993 at North Carolina State University. For those expecting it to be located at Duke this year, we were forced to make a venue change because of scheduling conflicts. Please join us in presenting papers at this meeting. It is run as closely as possible in the format of a national meeting. There is an opportunity to present in either a regular or a poster session. As in past years, we plan to have a meeting favor for those who present and we invite all presenters to be the guest of the Section at a buffet luncheon that follows the meeting. The deadline for receipt of titles is Friday, March 19, 1993. An application form showing the required information is given below. Please feel free, however, to send the information by e-mail, FAX or phone.

CALL FOR PAPERS

107th NC Section Conference
Saturday, April 24, 1993
North Carolina State University
Raleigh NC

Author(s): _____

Position(s): _____

Title: _____

Phone (senior author): _____

e-mail address: _____

Presenter: _____

Institution: _____

Session:

Analytical Biochemistry Chemical Education

Inorganic Organic Physical

Polymer Other

Other (specify):

Type of Session: Regular Poster Either

Type of Projector: _____

DEADLINE: Friday, March 19, 1993

Send application to:

William L. Switzer
 Chemistry-8204
 North Carolina State University
 Raleigh NC 27695-8204

Internet: bill_switzer@ncsu.edu
 (919) 515-5079 (FAX)
 (919) 515-2945 (W)
 (919) 847-7471 (H)

Local News

BASF: The U. S. Department of Energy's Argonne National Laboratory will explore ways to make high-temperature superconducting wire in a joint venture with the Fibers Research and Development Division in Enka NC (not our Local Section, but close enough to be interesting.) Otto Ilg, Director of the Division, said that the project is a logical extension of the BASF conductive fiber business.

Burroughs Wellcome: The FDA has released for marketing the antiprotozoal drug Mepron™ brand atovaquone as a treatment for mild to moderate *Pneumocystis carinii pneumonia* (PCP), a common opportunistic infection in people with AIDS. The drug is indicated for individuals who are intolerant to trimethoprim/sulfamethoxazole (TMP/SMX). Mepron also received a Notice of Compliance from Canada's Health Protection Branch (HPB) and is the first medication to undergo a joint, integrated review by the FDA and the HPB. See *The TarHelium*, V23, No. 1, September 1992 for more details about the drug (formerly 566C80) and its clinical trials.

In a related story, BW has announced a program that will place a cap on the annual cost of Mepron brand atovaquone. The cap is designed for patients who take more than 411 grams of Mepron a year and do not have third party coverage. Effective January 1, 1993, patients will receive up to an additional 684 grams at no cost for the remainder of the 12-month period.

Burroughs Wellcome: *BT Catalyst*, V6, No. 9, November 1992 reported that Burroughs Wellcome Company has bought the interest held by GI Manufacturing Inc., a subsidiary of Genetics Institute Inc., in WelGen Manufacturing Partnership, a biotechnology manufacturing joint venture begun in 1986. Under terms of the agreement, BW will purchase GI's interest for \$24 million. The West Greenwich, RI facility will operate under the name BW Manufacturing Inc. It will be a wholly owned subsidiary of BW.

The purchase represents a move by BW toward greater involvement in biotechnology product development. Earlier this year BW signed a three-year, \$5 million agreement with Duke University to identify and test potential anti-cancer drugs using monoclonal antibody technology.

"Biopharmaceutical products and manufacturing play an important part in our new product portfolio," said Philip R. Tracy, President and CEO of BW. "This acquisition expands our company's capability to pursue full clinical and commercial development of products developed through biotechnology and to manufacture them in a state-of-the-art facility."

BW's Alpha interferon product, Wellferon, is now being produced at the Rhode Island facility. Wellferon is marketed as a treatment for hairy cell leukemia and chronic active hepatitis B in a number of countries. Clinical trials are being conducted in the U. S. in patients with hepatitis C and in people with HIV infection. The product has also been studied as a treatment for genital warts and laryngeal papillomatosis.

Duke: Eric J. Toone, Assistant Professor of Chemistry at Duke, has received the 1992 Cyanamid Faculty Award from the American Cyanamid Company for his work on the study of lectins and how they interact with proteins. The award was based on recommendations by scientists from both the Agricultural and Medical Research Divisions of the company, and is for the use of Dr. Toone in the advancement of his research.

ETRG: The Department of Defense, Phase II Small Business Innovation Research (SBIR) Program has awarded, the Enzyme Technology Research Group, Inc. (ETRG) of Durham \$563,392 to develop a portable device for the selective determination of mercury compounds. The device is based on enzyme inhibition by mercury. Principal investigator is ACS member, **Dr. Jungao Zhao**. Also The National Institute on Drug Abuse, Phase I SBIR program has awarded ETRG \$49,977 to develop a new test strip design that combines the advantages of immunoassay and electrochemical response. The objective of this work is to demonstrate the feasibility of separationless, solid-phase electrochemical enzyme immunoassays to detect cocaine and marijuana metabolites in urine. The result will be an enzyme immunoassay electrode for drug use diagnosis. ACS member, **Dr. John P. O'Daly** is the principal investigator.

MacroNex: *BT Catalyst*, V6, No. 9, November 1992 reported that the Morrisville NC company, MacroNex, Inc. has raised \$4.5 million in a third round of venture financing. Paul Jones, co-founder and President of MacroNex, said that the money will allow MacroNex to expand its staff of 17. The company will hire three Ph. D. scientists and several masters-and bachelors-level scientists. MacroNex's competitive advantage is its exploitation of the macrophage, a key member of the white blood cell family that plays a critical role in a number of diseases. Macrophages are found in all tissues and have many critical immune system functions, including the production and release of a wide variety of key signaling and messenger molecules. Drugs that regulate macrophages are attractive agents for treating inflammatory and autoimmune diseases such as arthritis and septic shock because they will act at the earlier stages in the disease process according to MacroNex scientists.

NCCU: The Second Annual NC Fall Conference on Undergraduate Research was held on the campus of North Carolina Central University in Durham on November 12 and 13. Over seventy student papers were presented during the Conference and fifteen (8 oral and 7 poster) of the presentations were made by chemistry students. They represented several institutions in the NC Section of the ACS, including Elon College, Fayetteville State University, NC Central University, Pembroke State University and Durham High School. **Kristin Tate, April Scarborough** and **Marsha J. Ebanks** from Durham High School presented their research work as ACS-Glaxo Project SEED participants at Duke University last summer. **Brian R. Scott** from Pembroke State University was the recent recipient of the undergraduate research award from the NC Section of the ACS. Other student participants from the NC Section were: **Kermeth Huckleberry** and **Alison Meekhof** from Durham High School, **Carrie R. Holden** and **Kathryn Surdyk** from Elon College, **James Johnson, Veronica Hall** and **Ivy Ferron** from Fayetteville State, **Janel Meriweather** from North Carolina Central University, **Robert W. Fisher, Hildelisa Woods, Leslie Lowry** and **Kenneth R. Brayboy** from Pembroke State and **MaryAnn Lee Williams** from Shaw University. Faculty and industrial advisors were: **Ned Arnett, Louis Coury** and **Eric Toone**, Duke; **Eugene Gooch** and **Daniel W. Wright**, Elon College; **Maya Ganguli**, Fayetteville State; **Collin F. Chignell** and **Patrick J. Hayden**, NIEHS; **Paul A. Flowers** and **H. David Maxwell**, Pembroke State and **M. M. Bursey, Patrick Flood** and **James Raleigh**, UNC-CH. Glaxo was corporate sponsor for the event.

NCSU: Improvements valued at \$2.4 million are under way in Dabney Hall at North Carolina State University that will upgrade safety, ventilation and air conditioning in the chemistry research and teaching facility. The National Science Foundation awarded a \$1.2 million grant to NCSU, which will be matched by the University, to complete the three-year project.

"Dabney Hall was built in 1969 as a teaching facility, but since that time the building's labs have become more research oriented," explained Dr. Janet Osteryoung, head of the Department of Chemistry. "The upgraded ventilation systems are needed to accommodate increased research activities and to meet stricter standards for safety," she said. Osteryoung said the improvements will involve extensive electrical work, improved fans and chemical hoods in laboratories, and upgraded air conditioning, humidity and air quality controls that are needed to assure the functioning of sensitive instruments used in research and teaching.

In addition, there will be improved chemical storage areas and renovation of many laboratories to bring them up to more modern standards. Osteryoung said that since the building was constructed, fire and safety codes have changed radically. The planned improvements will bring the building in line with present safety codes. "When this project is complete, we will have a much modernized, much safer facility. It is crucial to do this upgrading," she said. "When all the work is done, the building will look the same, but we will have a modern, safe work environment where modern equipment can be used."

NCSU: ACS member, **Dr. Viney P. Aneja**, Marine, Earth and Atmospheric Sciences, recently received one of the University's Outstanding Extension Service Awards. He was recognized for his work in organizing and coordinating public school outreach programs and for the assistance he provides to citizens groups regarding air quality issues.

NCSU: Mrs. Mildred Showalter Zirkle of Berwyn PA recently established a scholarship endowment in honor of her late father Dr. Merle F. Showalter. **The Merle F. Showalter Undergraduate Scholarship in Chemistry Endowment** will provide awards to students who are pursuing degrees in chemistry with preference given to North Carolina residents. Dr. Showalter came to the Chemistry Department in 1929 and was instrumental in the development of the undergraduate program in chemistry. "It is appropriate to honor Dr. Showalter's contributions to the development of the department through the annual awarding of a scholarship in his name. We are grateful to Mrs. Zirkle for making it possible," says Dr. Kenneth Hanck, Professor of Chemistry, who worked with Mrs. Zirkle to execute the scholarship plans.

NCSU: Programs in the College of Physical and Mathematical Sciences, which includes chemistry, will benefit from several endowments and grants recently announced. **The Wachovia Fund for Excellence Endowment** was established by Wachovia Bank with a multi-year commitment of \$50,000. Income from this endowment will be used for general enhancements to college programs. "These funds will directly affect the teaching of students, the development of faculty and the seeking of answers to research problems. The Wachovia Fund for Excellence will complement our efforts to educate our majors in the physical and mathematical sciences and to help train other university students who apply these important basic concepts through programs such as engineering and business," says Dean Jerry L. Whitten.

Mr. John Alexander of Raleigh recently established **The John Alexander Endowment Fund** to support research and scholarships in environmental sciences. The endowment will be used to encourage outstanding scholarship and academic achievement of talented students in science and technology as these apply to environmental concerns. According to Cynthia Ball, Executive Director of the College's Foundation, "This commitment demonstrates Mr. Alexander's concern for the environment and his willingness to invest in our society's pursuit of scientific and technological advances towards its protection.

Programs in the College will also benefit from \$1 million granted to NCSU from the **Howard Hughes Medical Institute** in Bethesda MD. The funds will be used to strengthen undergraduate science education and to attract more students to biomedical scientific fields. Faculty affiliated with the College's **Science House** will develop laboratory kits and other science materials for high school classroom use in physics, chemistry and biological sciences. Dr. David Haase, Director of the Science House, emphasizes the importance of this interdisciplinary and collaborative approach. "A goal of the program is to show students that all of the areas of science are interdependent. The biomedical scientists of the future must appreciate and make use of developments in chemistry and physics."

Also the Office of the Provost, whose goal is the enhancement of the undergraduate and graduate teaching mission of NCSU, has generated a pool of moneys to support departmental and faculty-related activities. The moneys will support release-time for faculty to engage in a variety of efforts. There is a movement among large research-oriented universities to approach more ef-

fectively their teaching mission. The Dean of Undergraduate Studies has been given the charge of overseeing this effort.

Sphinx: Sphinx Pharmaceutical Corporation announced its results for the first quarter of fiscal 1993. The Company reported revenues of \$830,000 and a net loss of \$5.1 million, or \$0.42 per share. These results compare with revenues of \$54,000 and a net loss of \$2.1 million or \$0.33 per share for the same period a year earlier. Total revenue for the quarter ended September 30, 1992 increased significantly as compared to the year earlier period as a result of the Company's collaborative research and development agreement with Eli Lilly and Company, which became effective in October 1991.

"We have made solid advancements during the first quarter," said Clayton I. Duncan, President and CEO of Sphinx. "We completed Phase I human clinical trials and recently have initiated Phase II trials for Kynac™ (safingol) Ointment in patients with psoriasis. In addition during the quarter, we began a research and development collaboration with Washington University to study intracellular forms of PLA₂, which scientists believe may play a critical role in inflammatory diseases and in heart disease."

Thought for the day: (from Gail Hall, Trinity College) The latest issue of Bottom Line Personal, Dec. 15, 1992, p. 15, vol. 13, no. 23 has a blurb on the hazards of Christmas trees to eyes. Apparently needles can do some painful damage if an eye is scratched. Recommendation--wear safety goggles when moving or decorating the tree.

Now, if you have a Christmas tree in your workplace, is there an OSHA regulation requiring appropriate ANSI approved eye protection?

Job Related Information

CIIT: The Chemical Institute of Industrial Toxicology **Summer Internship Program** extend from 10 to 12 weeks. Applicants should have completed at least three years of college-level training in some aspect of the sciences prior to starting the Internship. Contact: William K. Silber, Manager, Human Resources, CIIT, P. O. Box 12137, Research Triangle Park NC 27709-2137; (919) 541-2070, X331. Application deadline is February 15, 1993.

EPA-RTP: Job line (919) 541-3014. Updated every Friday.

Glaxo: Research Scientist B. S. or M. S. in chemistry, biochemistry or related area with a minimum of 3 years experience or a Ph. D. with 0-2 years experience in the pharmaceutical industry developing analytical methods and specification for peptide drug substances and dosage forms. Familiarity with analytical instrumentation and methods used to characterize protein/peptide molecules is required. Refer to Job #8640-CM. **Automation Expert** responsible for leading the development of laboratory robotics and automation systems to meet departmental requirements. Working knowledge of Zymark systems is required. Relevant experience in the pharmaceutical industry is a plus. A Ph. D. in chemistry with 3-5 years experience is preferred, but a B. S. or M. S. with appropriate background and experience will be considered. Refer to Job #8640-AC. **Please send** resume indicating the corresponding Job # and your GPA to: Human Resources Department, Glaxo Inc., P. O. Box 13398, Research Triangle Park NC 27709. No phone calls or agency referrals. An equal opportunity employer M/F/D/V.

RTI: In its December 7 listings of current openings at the Research Triangle Institute, the following positions were given: **Analytical Chemist I** B. S. or B. A. in chemistry. Will perform chemical analyses. **Chemist I/II** B. S. or M. S. in chemistry. Will synthesize, purify and analyze novel organic compounds. **Postdoctoral Chemist** Ph. D. in chemistry with experience or training in organic synthesis. **Three Chemist I** positions. B. S. or B. A. in the general area of organic chemistry. **Chemist I/II** B. S. in chemistry with 1-2 years experience in chromatography and chemical analysis. **Chemist I/II** B. S. with experience or M. S. Will prepare radio labeled compounds and perform organic synthesis. **Chemist I/II** B. S. or B. A. in chemistry with training or experience in organic synthesis. **Env. Sci./Eng. III** or **Res. Env. Sci./Eng. I** B. S. or M. S. in chemistry, environmental science or environmental engineering with 2-3 years experience and knowledge of environmental laws and regulations particularly RCRA and Superfund. Must have good writing skills. Will assist in providing support for Superfund management program. Review and evaluate background document related to remedial action at hazardous waste sites. **For. An. Tox. III/Res. For. An. Tox I** B. S. or B. A. in chemistry or related discipline with at least 1-2 years experience with review/certification of GC/MS and immunoassay data, QC procedures and chain of custody. **Natural Products Scientist** Ph. D. in related area with strong background in natural products chemistry with expertise in isolation and structure determination and/or synthesis and testing. Will provide leadership in natural products research; write grant proposals; manage research projects and supervise

laboratory staff. **Five Postdoctoral Chemist** positions in the general area of organic chemistry. **Quality Assurance Specialist I B. S.** in chemistry or biological sciences with experience in analytical chemistry in a GLP environment. Will perform inspections on analytical chemistry and toxicological studies. **Res. Forensic An. Toxicologist I/II** Ph. D. in chemistry, toxicology, pharmacology or related discipline with experience in the scientific and technical direction of urine drug testing laboratory. Will review laboratory applications and inspection reports, SOP's laboratory data and other information and determine certification status. **Contact:** Office of Human Resources, Research Triangle Institute, P.O. Box 12194, Research Triangle Park NC 27709-2194. (919) 541-6466.

Directory of Outreach Programs

A directory of public outreach programs and publications offered by the nation's chemistry community is now available free of charge from the ACS. The programs listed include such activities as science competitions, teacher workshops and speakers bureaus. According to ACS's Kenneth Chapman, the 53-page booklet should be especially useful to science educators and organizations desiring increased contact with the chemistry community, as well as to everyone interested in science generally. He notes that it could benefit organizations with outreach programs already in place by indicating what is being done elsewhere.

The directory was produced by the ACS Education Division with cooperation of the Council of Chemical Research, Chemical Manufacturers Association and Pharmaceutical Manufacturers Association. It describes public outreach activities by ACS local sections, chemistry departments of research universities and chemistry-oriented companies. Sources of the information are listed, including names and phone numbers of contacts.

Former ACS president, Paul G. Gassman, in his introduction to the directory notes that "science rich" chemistry organizations (e. g., corporations, universities, government agencies and professional organizations) contribute broadly to science and technology activities. But in spite of all this effort, "Millions of students still receive seriously inadequate education in science and technology," he says. "Also, only a small fraction of the general public has regular opportunities to learn about or to be updated about important aspects of science and technology that affect the economy, the environment, and life itself," he adds. "We believe this report will be useful to all concerned--that the 'science rich' will be stimulated to expand their outreach and that the 'science poor' will be aided in their search for programs and resources that may be used locally with little or no modification."

The scope of the directory is reflected in its table of contents, which describes 21 ongoing programs under the heading "student-oriented programs"--from "career exploration" to "tutoring and homework hot lines." The "scholarships" section lists 104 sponsors. Next is "teacher-oriented programs," which includes "summer employment for teachers," "teaching as a second career," and "research internships for high school faculty." The third heading, "institutional support," includes "instructional materials development," "media events and materials," and "mini-grants, grants and other financial support."

Copies of the directory may be obtained by phoning (800) 227-5558, option 86. [*The TarHelium* Editor has ordered a copy of this directory if anyone wishes to review it.]

Environmental Regulation Workshops

The Industrial Extension Service at North Carolina State University is offering five different workshops on Environmental Regulations. **Right-to-Know: SARA, Title III, and OSHA/Hazard Communication** is being offered on January 20 in Raleigh and again on March 1 in Greensboro, May 10 in Charlotte and June 7 in Wilmington. **SARA Training for Chemical Spills** will be offered in Raleigh on January 29 and again on March 22 in Statesville and on May 7 in Wilmington. **Techniques and Practices: Managing Underground and Above-ground Storage Tanks** will be offered on February 15 in Raleigh and on April 22 in Greensboro. **Hazardous Chemicals: Safe Practices and Procedures** will be offered on February 25-26 in Wilmington and June 9-10 in Raleigh. **Air Quality: Compliance with the Clean Air Act Amendments of 1990** will be offered in Raleigh on March 15, in Charlotte on March 17 and in Winston-Salem on March 19. Also the Industrial Extension Service will offer four Safety Workshops. **Ergonomics: Man-Machine Engineering** will be presented on February 8-9 in Statesville and May 3-4 in Raleigh. **Accident Prevention for Supervisors** will be presented on February 18 in Raleigh. **Electrical Safety** is scheduled for February 22-23 in Charlotte and again April 19-20 in Wilmington and June 1-2 in Raleigh. **Fire and Life Safety** will be offered on April 26 in Raleigh. For registration and information contact Bobbi Baird at (919) 515-3954 or Linda Howard (919) 515-3002. There is a charge for each workshop and discounts are available for three or more participants from the same company.

Iota Sigma Pi

Iota Sigma Pi is a National Honor Society for Women in Chemistry. [There is not a chapter in North Carolina; Is it time?] The society is calling for applications for four different awards each of which has a deadline of February 15, 1993. Awards will be announced by April 15. [It appears that awardees need not be members of the organization in most cases.]

Members-at-Large Educational Reentry Award This \$500 award shall recognize potential excellence in chemistry and related fields achieved by a woman at the graduate or undergraduate level. At the time of nomination, the candidate must: 1) have returned to academic studies after an absence of three or more years, 2) be a degree candidate in chemistry or a related field at an accredited four-year college or university, 3) have completed at least one academic year of college chemistry and 4) exhibit exceptional qualities of interest, excellence and professional potential in chemistry. **Undergraduate Award for Excellence in Chemistry** This \$300 award is open to a senior woman in chemistry from an accredited college or university that grants a four year degree. **Gladys Anderson Emerson Scholarship** This \$1000 scholarship is open to a junior woman in chemistry or biochemistry from an accredited college or university who must have at least one semester of work to complete after August 1. **Anna Louise Hoffman Award** This award of \$400 for outstanding Achievement in Graduate Research is open to any full-time woman graduate student who is a candidate for a graduate degree in chemistry.

These applications are generally not lengthy. For details about the application criteria, addresses and forms, where appropriate, contact *The TarHelium* Editor.