



# The TarHelium

Volume 25, Number 4

December 1994

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## TMMDG Meeting

4:00 p.m., Friday, December 2, 1994  
111-Beard Hall  
School of Pharmacy, UNC-Chapel Hill

John L. Finney  
Quain Professor of Physics  
University of London, England  
**"Hydrophobia: new results from  
neutron scattering on solvent structure  
close to non-polar groups"**

ABSTRACT: see p. 8

## Polymer Discussion Group

Thursday, December 8, 1994

Sanat Kumar  
Pennsylvania State University  
**"Aspects of Polymers Near Surfaces"**  
NCSU Faculty Club  
4200 Hillsborough St., Raleigh

5:30 p. m. Social Hour

6:30 p. m. Dinner\* (members-guests:  
\$15; students \$8)

7:30 p. m. Lecture

\*Reservations by noon, December 6 with  
Richard Venditti in Raleigh at: 515-6185  
or richard\_venditti@ncsu.edu

## NCACS Distinguished Speaker

Monday, December 12, 1994

James Jorgenson  
University of North Carolina, Chapel Hill  
Meredith College  
3800 Hillsborough St., Raleigh

6:15 p. m. Dinner\* (members-guests:  
\$10; students \$5)

7:30 p. m. Lecture-Cates Auditorium

8:30 p. m. Reception-Cates Auditorium

\*Reservation required by Wednesday,  
December 7, 1994. In Chapel Hill call  
Becky Smith, 962-2172; in Durham,  
Bonnie Turner, 660-1506; in Raleigh,  
Joyce Dunn, 515-2546; in Fayetteville,  
Sandra Smith, 486-1571; or by e-mail at  
Internet: bill\_switzer@ncsu.edu

## Local Section Election Results

Thomas A. Lehman, Chair Elect  
Joan T. Burse, Treasurer  
Richard A. Palmer, Councilor '95  
Robert W. Shaw, Alternate Councilor '95

## The TarHelium

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

### Executive Committee:

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R. Ghirardelli (ARO-Ret.), Co-chair SERM-98, <i>Ex Officio</i>	489-6306
W. L. Switzer (NCSU), Co-chair SERM-98, <i>Ex Officio</i>	515-2945

### Voicemail Information Line: (919) 541-7183 in the RTP

6010-General ACS  
6011-Polymer Discussion Group  
6052-Magnetic Resonance Spectroscopy Discussion Group  
6053-Mass Spectrometry Discussion Group  
6054-Triangle Chromatography Discussion Group

### National ACS meetings:

April 2-6, 1995, Anaheim  
December 17-22, 1995, Honolulu  
March 24-29, 1996, New Orleans  
August 20-24, 1995, Chicago  
International Chemical Congress of Pacific Basin Societies  
August 18-23 1996, Boston

**Deadline for January Publication: December 12, 1994**

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W. L. Switzer, Editor

S. T. Purrington, Assistant Editor

P. A. Flowers, Advertising

*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. Public lectures and seminars as well as announcements of interest to the ACS membership will be listed as deemed appropriate by the editor and as space permits. Short commentaries or contributed articles will also be considered. Also, we are happy to publicize, free of charge, any job openings for chemists. (We also accept paid advertisements for more extensive recruiting announcements.) The **Deadline** for each publication is usually the first of the month prior to publication.

Contributions for *The TarHelium*: Send to W. L. Switzer, Editor, Chemistry-8204, North Carolina State University, Raleigh NC 27695-8204. Phone: (919) 515-2945, Fax: (919) 515-5079 and Internet: bill\_switzer@ncsu.edu.

**Advertising:** All nine issues of the *TarHelium* will accept advertising. The cost is \$25 per column-inch based on a 3.5 inch width; two-inch minimum. There is a 10% discount for advertising in four or more issues in a publication year which runs from September through April plus one issue in the summer. Contact Paul Flowers, Advertising Manager, Department of Physical Science, Pembroke State University, Pembroke NC 28372, Phone: (919) 521-6247 Fax: (919) 521-6649 and Internet: paul@nat.pembroke.edu.

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

If you wish to change your membership status or *The TarHelium* mailing address, please submit your new address along with your old address in the form of a recent *C&EN* or *TarHelium* address label to:

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American Chemical Society  
P. O. Box 3337  
Columbus, OH 43210  
meminfo@acs.org

When communicating electronically, include your membership number and a return telephone number in your message. You may request membership applications electronically, but when completing them please write NC Section in the blank labeled Local Section/Division Commission Claim in the lower right hand corner of the first page. You may also request add/drop subscriptions among other services.

If you wish to receive job announcements and announcements of Local Section ACS events by electronic mail, please subscribe to the NCACS list. Send e-mail to: listserv@listserv.ncsu.edu. Include a one-line message saying: subscribe ncacs <your name>. To remove your name, send a message to the same address saying: unsubscribe ncacs. Other features of the list can be obtained by sending mail to the same address with the one-line message saying: info ncacs. The info file includes on-line job search information and a list of companies in the Section who hire ACS members. Questions may be addressed to the *TarHelium* Editor.

To subscribe to a Local Section bulletin board to discuss general topics of interest to the chemical profession, follow the same procedure described above, but include the one-line message saying: subscribe ncacsdialog <your name>. To post to the list, send mail to ncacsdialog@ncsu.edu.

To communicate with the entire Executive Committee, send mail to: acsexcomm@ncsu.edu. On-line copies of recent issues of *The TarHelium* are now available on the Triangle FreeNet at the University of North Carolina, Chapel Hill. One may telnet to: tfnet.ils.unc.edu with login: freenet and password: guest. Issues are archived under:

4. Business/
3. Professional organizations/
  1. ACS American Chemical Society/
  1. ACS TarHelium (newsletter)/

Alternatively one may reach the server by gopher. From the State of North Carolina:

University of North Carolina at Chapel Hill, Info system  
Other information services  
Triangle Free-Net development gopher  
Business  
Professional organizations  
ACS American Chemical Society  
ACS TarHelium (newsletter)

ChemInnovation Software - p.

2

3 Structure Drawing Software

4

5 8190-E Mira Mesa Blvd., Suite 428

6 San Diego CA 92126

7

8 (619) 566-2846

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Charles Lochmüller, Duke, <clochmul@chem.duke.edu> is compiling a list of RTP area sites which have WWW access and/or WWW html institutions. Please send him a note if you do or soon will.

## Area Seminars

- Dec 1 Pierre Chambon, "Retinoid Receptors and Gene Regulation-Part I", NIEHS
- Dec 1 Edward Stiefel, Exxon Research and Engineering Co., "Bacterioferritin: Iron, Heme, and Protein", NCSU-BC
- Dec 2 John L. Finney, University of London, England, "Hydrophobia: new results from neutron scattering on solvent structure close to non-polar groups", TMMMDG
- Dec 2 M. S. Platz, Ohio State University, "Photochemical Inactivation of the HIV Virus in Human Blood", Duke
- Dec 2 Edward Stiefel, Exxon Research and Engineering Co., "The Exxon Valdez Oil Spill: The Bioremediation of Prince William Sound", NCSU
- Dec 2 Pierre Chambon, "Retinoid Receptors and Gene Regulation-Part II", NIEHS
- Dec 8 Sanat Kumar, Pennsylvania State University, "Aspects of Polymers Near Surfaces", PDG
- Dec 8 E. Stuart Maxwell, North Carolina State University, "Evolutionary Analysis of Elements Required for U14 snoRNA Processing", NCSU-BC
- Dec 9 Hector Abruña, Cornell University, "Anion Effects on the Underpotential Deposition of Copper on Platinum Single Crystal Surfaces. Electrochemical and *In Situ* X-ray Studies", Duke
- Dec 12 James Jorgenson, University of North Carolina, Chapel Hill, ACS Distinguished Speaker Award

ACS-American Chemical Society general meeting. Call Bill Switzer 515-2945 (NCSU). Voice Mail 541-7183, box 6010

PDG-Polymer Discussion Group. Call Richard Venditti at NCSU: 515-6185 or richard\_venditti@ncsu.edu. Voice Mail 541-7183, box 6011

TMMMDG-Triangle Molecular Modeling Discussion Group. Call Alex Tropsha 966-2955 (UNC-CH).

Duke (Chemistry) Call Bonnie Turner at 660-1506.

NCSU (Chemistry) Call Joyce Weatherspoon at 515-2548.

NCSU-BC (Biochemistry) Call Pat Sullivan 515-2581.

Considerable resource information is given on the address page and on the front inside cover of each *TarHelium*. You will find how to:

- change your address with the ACS by mail or e-mail
- access voice mail announcements for each Local Section discussion group
- access on-line copies of *The TarHelium*
- subscribe to NCACS, a bulletin board for receiving Local Section meeting announcements and area job announcements
- subscribe to NCACSDIALOG, a bulletin board for those who might want to dialog on concerns about the chemical profession
- contact the Local Section Executive Committee individually by phone or as a group by e-mail
- submit announcements and advertisements for *The TarHelium*
- when and where future National ACS meetings are held

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Quantitative Technology Inc. - p. 5

## Operation Chemistry

Operation Chemistry is a national teacher education program in chemistry for teachers of upper elementary and middle school (grades 4-8). It is sponsored by the ACS and the NSF with training sites located at the University of Wisconsin-Oshkosh and Purdue University. The program's goal is to foster a new and dynamic method of teaching chemistry by developing and training a national network of teams who will, in turn, train teachers in their regional areas.

Each team will consist of a college chemistry faculty member, a high school chemistry teacher, an elementary or middle-school physical science teacher and a representative from a local chemical industry who has worked with pre-high school science education. Educator participants will attend an intense, three-and-a-half week "trainer of trainers" session between July 9 and August 2, 1995 (two weeks in Oshkosh and one-and-one-half weeks at Purdue). Industry representatives will attend only one week's session at Purdue. After the summer training workshop (either in teams or as individuals), participants will work with fourth through eighth grade teachers in their home districts, providing a minimum of 72 contact hours of workshop training per team during the 1995-96 academic year.

During the "trainer of trainers" summer session, Operation Chemistry will pay for participant's meals and lodging at the universities as well as up to \$400 each for travel to and from the training sites. In addition, each academic participant in the summer session will receive a \$1200 stipend plus a follow-up stipend of \$300 for the 1995-96 academic year and a travel award of \$300 to attend a national meeting of the National Science Teachers Association. Each team will also receive \$400 in support of materials and supplies for the follow-up training workshops.

Those selected as Operation Chemistry Team members will:

- practice methods of weaving chemistry into the elementary and middle school curriculum
- engage in peer teaching of tested hands-on chemistry activities
- develop and participate in a valuable network with other leading educators in their own geographical areas and across the country
- share teaching successes and strategies with other teachers
- develop skills in teaching for conceptual change and work with adult learners

**Who can apply:** Operation Chemistry is seeking experienced teacher-educators from four levels or areas: college level chemistry, high school chemistry, pre-high school physical science and industrial chemistry.

**How to apply:** You may apply as an individual or as a pre-formed team (one of each of the categories listed above). If you apply as an individual or as a partial team, we will try to match other eligible applications we receive from your region with you. However, there is no guarantee that we can find people to complete your team; only complete teams (individuals from each of the categories listed above) will be eligible for summer training. If you are interested in becoming a participant in Operation Chemistry, we must receive from you no later than January 31, 1995 a typed application packet containing:

- a completed cover sheet (supplied on request)
- current *curriculum vita* (resume) indicating your science background and your experience with teaching, teacher training and proposal writing if applicable (2 pages)

- personal statement explaining your interest in becoming an Operation Chemistry trainer (2 pages...be creative!)
- letter of support-statement on letterhead from your school district, institution or company stating that you have been granted release time to participate in the summer workshop and the required 72 hours of follow-up regional training sessions(s) during the 1995-96 academic year
- letters of recommendation-letter from two professionals who have observed you as a trainer of grades 4 through 8 teachers or participated in a teacher training workshop you conducted

**Where to apply:** Send your completed application packet by January 31, 1995 to:

Operation Chemistry  
American Chemical Society  
Education Division  
1155 16<sup>th</sup> Street, NW  
Washington DC 20036

For more information call ACS at (202) 872-6125 or send a fax to (202) 833-7732.

*(Editor's Note: I have copies of the application material which I will share. My address, phone numbers and e-mail address can be found on the inside cover. I, myself, am planning to apply as a team member from those who responded to the announcement of this program last year. I am interested in identifying back-up participants in case one of our team members needs to withdraw. If there is sufficient interest in forming a second team, I would be happy to help match participants--Bill Switzer).*

DIONEX c. - p.

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IC, Automation and HPLC

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5 1950 Lake Park Drive, Suite 175

6 Smyrna GA 30080

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8 (404) 432-8100 (voice)

9 (404) 432-8300 (fax)

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## High School Teachers

by Dr. Sarah Allen, Chair High School Committee

**Report on NC Science Teachers Convention:** Science Teachers from all over the state of North Carolina gathered in Raleigh from November 9-11 to share educational experiences with each other and to collaborate as professionals. There were many new faces presenting sessions, which is always encouraging but many dedicated frequent presenters were also there demonstrating their continued dedication to educating our youth in science and related fields. While there were numerous chemistry sessions, we can always use more so remember next year to submit a proposal and share something you do with the rest of us. Remember to tell your physics and biology colleagues that they are needed too.

The videotaped ACS Satellite-TV Seminar on Materials Science was viewed in a preconference workshop by 21 High School Chemistry Teachers. The broadcast on Monday night generated some good and stimulating questions by participants. The Materials Science Seminar Book which accompanied the presentation is a nice collection of activities and background materials.

**Chemistry Olympiad:** It is now time to begin thinking about the 1995 United States National Chemistry Olympiad (USNCO), Program. The goals are : 1. To stimulate all young people to achieve excellence in chemistry; 2. To recognize outstanding chemistry students and, by doing so, to encourage additional learning at a formative time in their intellectual development; 3. To recognize the excellence achievement of the teachers of these students and the importance of the school environment in which they learn; 4. To promote contact between ACS local sections and area schools and to foster the interest and influence of professional chemists in the teaching of chemistry; 5. To challenge the chemical knowledge and skills of students in an international arena; and 6. To foster cross-cultural experiences and to acquaint students with similarities and differences between themselves and their counterparts in other nations.

The 1995 USNCO National Exam will consist of three sections. Part I is multiple choice, Part II is written and requires the use of chemical models or theories, and Part III is a lab practical. Local Sections are responsible for arranging proper facilities and providing equipment and for conducting the lab practical. More information will be available in the January update and will be transmitted at that time. In 1994, 138 sections participated in the USNCO program. The 1995 goal is to encourage all 187 local sections to become a part of this activity.

Students competing in the USNCO are eligible to be selected as members of the US team for the International Chemistry Olympiad. For the past eleven years the US has sent a team of four students to compete with nations around the world at the International Chemistry Olympiad (IChO). These students participate in both theoretical and laboratory examinations over several days. Gold, silver and bronze medals are awarded to the best performers and the IChO provides students with the opportunity to interact with their peers from other countries. The 1995 international event will be held in Beijing, China, July 12-27, 1995.

The identification of the four-member team begins with testing at the local school system level. Please register your students for the competition by completing and returning the attached registration in this TarHelium to Dr. Myra Halpin, your Local Section Olympiad Coordinator, at NCSSM, 1219 Broad Street, Durham, NC 27715. If you have questions or need more information, call her at (919)286-3366 ext 419.

## PARTICIPATION RESPONSE FORM THE 1995 U.S. NATIONAL CHEMISTRY OLYMPIAD

Local Section: North Carolina Local Section #423

Response (Please check one)

We are interested in participating in 1995

We are not able to participate this year. Please give reason.

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(Please print or type the information requested below)

Local Section Olympiad Coordinator: Myra Halpin

US Mail Address: \_\_\_\_\_

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UPS Shipping Address: \_\_\_\_\_

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Telephone:

Home: \_\_\_\_\_

Work: \_\_\_\_\_

Fax: \_\_\_\_\_

e-mail: \_\_\_\_\_

Please complete and return this form to Dr. Myra Halpin, NCSSM, 1219 Broad St., Durham, NC 27715 by January 31, 1995.

Huffman Laboratories, Inc. - p.
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3                                   Elemental Analysis
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5 4630 Indiana Street
6 Golden CO 80403
7 (303) 278-4455
8 (303) 278-7012 (FAX)
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**ACS High School Chemical Hygiene Plan:** The ACS will shortly release a brochure and a diskette (Macintosh or MS-DOS) which contain all of the information needed to establish and revise a Chemical Hygiene Plan as required by OSHA (29CFR1910). The cost will be approximately \$15. This material was developed by a subcommittee of the ACS Committee on Chemical Safety. While the High School Chemistry Laboratory community is the targeted audience, the materials can be adapted for almost any laboratory situation. Contact George Wahl: george\_wahl@ncsu.edu, Chemistry - Box 8204, NC State University, Raleigh, NC 27695-8204, (919) 515-2941, FAX: (919) 515-5079.

**Chemistry on the Road:** Once again in the Spring 1995, Bill Switzer is offering his Chemistry on the Road show called "Chemical Energy Transformation" through the Science House at North Carolina State University. Call him at (919) 515-2945 to make arrangements.

That's all for this month. Remember to send news for High School Chemistry Teachers to me at (919) 286-3366 ext 225, or NCSSM, 1219 Broad St., Durham, NC 27715.

Quantitative Technology Inc. - p.

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Elemental Analysis

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5 PO Box 470

6 Whitehouse NJ 08888

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8 (908) 534-4445

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## University Grants and Contracts

**Natland International Corp:** "Unrestricted",. **D. L. Comins**, NCSU

**NIH:** "Transport and Delivery of Antisense Oligonucleotides", Barbara R. Shaw, Duke; "Pyruvate Aldolases in Organic Synthesis", Eric J. Toone, Duke

### Area News

**Corning BioPro:** The *BT Catalyst* reported that Corning BioPro, a new joint venture by Corning Life Sciences Inc. and BioPro Corp., will build a \$57 million contract bioprocessing plant in the Research Triangle Park to manufacture biologics for the pharmaceutical and biotechnology industries. The 61,000-square-foot facility, which will employ 125 people, will be the first of its kind in the country.

**Duke: Eric Toone** is acting director of the new University Program in Biological Chemistry, an NIH training grant based program to train students at the interface of chemistry and biology. The Program includes faculty from the departments of Biochemistry, Botany, Chemistry and Molecular Cancer Biology. They are trying to recruit and to matriculate the first entering class, for next summer 1995. Toone also gave invited lectures at

Schering-Plough Research Institute, the University of Texas-Austin, Rice University, University of Houston and Johns-Hopkins University. **Weitao Yang**, Assistant Professor of Chemistry, gave invited talks at the 1994 Society for Computer Simulation Multiconference, at the 2<sup>nd</sup> Canadian Computational Chemistry Conference, for the Satellite Symposium of the 8<sup>th</sup> International Congress of Quantum Chemistry: Thirty Years of Density-Functional Theory, and at the International Workshop "Electronic Structure Methods for Truly Large Systems: Moving the Frontiers in Quantum Chemistry", Braunlage, Germany, as well as talks at Tulane University, Nanjing University (China), and the University of California, Santa Barbara. Graduate student, **Daniel Kraiter** (Crumbliss Group), presented an invited paper at the Second International Symposium on Electroorganic Synthesis, in Kurashiki, Japan, in September, 1994. Mr. Kraiter was selected by the Symposium organizers to receive a Foreign Young Chemist Award. The Award consists of travel expenses to attend the symposium in Japan and a certificate. Mr. Kraiter's paper entitled "Electrochemical Behavior of Polyphosphazene Polymers With Pendant Hydroxymethylferrocenyl Groups in Solution and Films" and co-authored by P. Wisian-Neilson and A. L. Crumbliss, will be published in Proceedings of the Second International Symposium on Electroorganic Synthesis.

**NCSU: D. L. Comins** gave invited talks at Merck & Co. Inc., Lilly Research Laboratories and Upjohn Company. **Mike Whangbo** has been elected the recipient of a Alexander von Humboldt Research Award for Senior US Scientists. The award was granted in recognition of past accomplishments in research and teaching and entitles him to stay for a period of six months at a research institute of his choice in Germany. **Mark Wood**, BA '94, was presented the 1993-1994 North Carolina Cooperative Education Student of the Year award on Thursday, November 3, at the North Carolina Cooperative Education Association Annual Conference in Atlantic Beach. This award was based on the student's achievements on the job and at school; also contributions to the employer, community and cooperative education.

The ACS reported that NCSU's Department of Chemistry ranked third in the number of chemistry graduates in the nation in 1992-1993, the latest period for which data were available.

Galbraith Laboratories - p.

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Microanalysis Services

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5 PO Box 51610

6 Knoxville TN 37921-1750

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8 2323 Sycamore Dr

9 Knoxville TN 37921-1750

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11 (615) 546-1336

12 (615) 546-7209

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## 1995 Patterson Crane Award

Nominations are sought for the Patterson Crane Award, which acknowledges contributions to the field of chemical literature, especially chemistry documentation, chemical information storage and retrieval and implementation and management of chemical information services. Application deadline is January 31, 1995. If interested in receiving information, please contact James L. Chao, Chair Awards Committee at IBM, 543-3054.

## Molecular Modeling and Drug Design

Introduction to Molecular Modeling and Drug Design

January 24-26, 1995

North Carolina Supercomputing Center  
Research Triangle Park, North Carolina

The North Carolina Supercomputing Center (NCSC) is pleased to offer "Introduction to Molecular Modeling and Drug Design." World-renowned experts from pharmaceutical companies and academia will lecture on the state-of-the-art techniques in molecular modeling and drug design such as molecular dynamics, ligand based drug design, receptor based drug design, protein structure prediction, molecular databases, application of quantum mechanical methods to molecular modeling, and information retrieval from World Wide Web using Mosaic. In the hands-on sessions, workshop participants will learn how to apply the techniques using the state-of-the-art modeling programs from three leading software companies (Biosym Technologies, Inc., Molecular Simulations Inc. and Tripos Associates, Inc.). After completion of the workshop, participants will be able to enhance their research and shorten their drug design cycle considerably by applying the techniques learned in the workshop.

Attendance will be limited to fifteen to allow adequate training for all attendees. For more information please contact Dr. Hong Ma via e-mail to hongma@ncsc.org or by calling 919-248-1176.

Registration fees are \$120.00 for North Carolina academic institutions, \$180.00 for out-of-state academic institutions. Industrial fees are \$750.00.

### Agenda

#### Tuesday, January 24, 1995

- 8:30 Remarks and Course Overview
- 8:45 Molecular Modeling in Drug Design
- 10:00 Break
- 10:15 Lab I: Graphic Interface
- noon Lunch
- 1:00 Ligand Based Drug Design
- 2:30 Lab II: Pharmacophore Model Generation
- 5:00 Dinner
- 7:00 Molecular Databases
- 8:00 Lab III: Molecular Database
- 10:00 End

#### Wednesday, January 25, 1995

- 8:30 Molecular Mechanics and Dynamics
- 10:00 Break
- 10:15 Lab IV: Minimization and Dynamics
- noon Lunch
- 1:00 *Ab Initio* and Semi-empirical Methods
- 2:00 Break
- 2:05 Density Functional Method
- 3:05 Lab V: Application of Quantum Mechanics Methods
- 5:00 Dinner
- 7:00 Optional Lab Time
- 10:00 End

#### Thursday, January 26, 1995

- 8:30 Protein Structure Prediction
- 10:00 Lab VI: Protein Structure Prediction
- noon Lunch
- 1:00 Receptor Based Drug Design
- 2:00 Lab VII: Receptor Based Drug Design
- 4:00 Drug Design -- A Practical Example
- 5:15 End

### LECTURERS:

Mike Agostino	Glaxo, Inc.
Webb Andrews	Burroughs Wellcome Company
Frank Brown	Glaxo, Inc.
Lee Bartolotti	NC Supercomputing Center
Alexander Tropsha	University of North Carolina, CH
Mike Mitchell	Becton Dickinson Research Center
Mark Murcko	Vertex
Lee Pedersen	University of North Carolina, CH

### INSTRUCTORS:

Lee Bartolotti	NC Supercomputing Center
Hong Ma	NC Supercomputing Center
K. Raghavan	Biosym Technologies, Inc.
Scott Kahn	Molecular Simulations, Inc.
Chris Van Dyke	Tripos Associates, Inc.

1	Micron Inc. - p.
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3	Analytical Services
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5	3815 Lancaster Pike
6	Wilmington DE 19805
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8	(302) 998-1184
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## Job Openings

All job announcements are broadcast immediately upon receipt to the NCACS recipients list. If you wish to be included, see subscription instructions given on the front inside cover. The INFO file for the NCACS bulletin board has instructions on searching job opening with the State of North Carolina, North Carolina State University and University of North Carolina, CH.

**Burroughs Wellcome:** Job Line (919) 315-8347.

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

**Glaxo:** Job Line (919) 248-2565.

**RTI:** Contact: Research Triangle Institute, Office of Human Resources, PO Box 12194, Research Triangle Park NC 27709-2194. Phone: (919) 541-6466. **Chemist II/III** J0280 91A B.S./M.S. in Chemistry with 1-3 years of experience in method development and proficiency in liquid gas chromatography (HPLC and GC). Will perform development/evaluation, trace organic analysis and do report preparation. **For. An. Tox. III/Res. For. An. Tox. I** F0455 64A B.S./B.A. in Chemistry or related area with at least 1-2 years experience with review/certification of GC/MS and immunoassay data and forensic

chain of custody procedures. **Postdoctoral Chemist** F0450 63A Ph.D. in Organic Chemistry with experience or training in organic synthesis. Will conduct research to synthesize novel organic compounds. **Postdoctoral Chemist** F0462 63A Ph.D. in Organic Chemistry with research experience in organic synthesis. Will conduct research to synthesize novel organic compounds. **Postdoctoral Chemist** F0464 64A Ph.D. in Organic Chemistry with research experience in organic synthesis. Will synthesize haptens and conjugates for catalytic antibody programs. Some analytical (kinetics) work. **Postdoctoral Chemist** F0468 63A Ph.D. in Chemistry with research experience in synthetic organic chemistry. Will synthesize novel organic compounds. **Postdoctoral Chemist** F0472 63A Ph.D. in Organic Chemistry with research experience in organic synthesis. Will synthesize novel organic compounds. **Research Associate I** J0275 96A Ph.D. in Chemical Engineering with 0-3 yrs. experience in high pressure gas-solid catalysis and hydrocarbon conversion. Will carry out laboratory experiments in gas-solid catalysis and prepare reports and technical publications based on results.

Beckman Instruments, Inc. - p.

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3 Chemical Instrumentation

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5 Howard Rosenberg, Ph. D.

6 1210 Ashbrooke Dr.

7 West Chester PA 19380

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9 (215) 429-1375 (PA)

10 (201) 818-8900 (NJ)

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## Passer Fund Seeks Proposals

The ACS Division of Chemical Education is soliciting proposals for awards for its Dorothy and Moses Passer Education Fund, which provides faculty-development grants **for teachers of chemistry or chemical technology at two- and four-year institutions without graduate programs** in the chemical sciences. The vision of the Passers is that the fund should provide support for teachers who are somewhat isolated from others in the discipline, such as those who are the only teachers of chemistry in their institution. It is expected that the requesters will also provide some of the support needed for their proposals through personal or other resources. Proposals for awards from the Passer Fund should be sent to the immediate past chair of the Division (for 1994, Donald Jones, Department of Chemistry, Western Maryland College, Westminster, MD 21157; for 1995, Adrienne Kozlowski, Chemistry Department, Central Connecticut State University, New Britain, CT 06050). Proposals may be submitted at any time, but please allow at least six months for consideration between proposal submission and the event or project to be funded. Proposals must include a short description of the intended use for the award, a CV of the requester, and a brief description of the requester's institution.

## Call for Papers MARM-95

The Middle Atlantic Regional Meeting (MARM) will be held May 24-26, 1995 at The American University in Washington DC. Persons interested in submitting papers contact:

Dr. Frederick Carson  
 Department of Chemistry  
 The American University  
 Washington DC 20016-8014  
 Phone: (202) 885-1750  
 Fax: (202) 885-1752

## HS Tech Prep Program

A high school curriculum program aimed at preparing students for careers as technicians or similar workers in science-based fields has received a \$1.5 million, three-year grant from the NSF. ACS proposed and will administer the program.

Called "Science Technology: Knowledge and Skills," or SciTeKS, the program is applicable to biology, chemistry and the earth and space sciences, according to the ACS proposal. It will provide curriculum recommendations, instructional materials, a base for teacher enhancement and models for academic-employer alliances that will enable the nation's schools to provide high quality, workplace-oriented education in those areas. The proposal notes that those areas "have received little attention at the high school level in the recent education reform efforts".

The program will challenge many established practices of science education, says the proposal. It may operate in existing institutions, but will demand that teaching and learning patterns change, and will require the traditional roles of teachers, students and employers alike to change in ways that already have proved successful, it explains. Substantial employment opportunities are available in the sciences, the proposal points out, "Chemistry alone employs some 240,000 technicians and 500,000 plant operators," it states. But students typically find only limited success following traditional (high school) science courses, it adds.

Students completing SciTeKS will be prepared to enter two-year college technician programs, and those seeking immediate employment will be ready to enter employer training programs without requiring the introduction often found necessary, it adds.

The program will develop printed and multimedia material for students and teachers for use in "modules" involving chemistry, biology and the earth-space sciences. A sample module focuses on proposed process changes in the manufacture of aspirin. Students seek to identify and evaluate chemical and other factors important to quality control when changing the way aspirin is made.

Directors (co-principal investigators of the program are Dr. David Lavalley, provost at City College of New York, and Kenneth M. Chapman, head of Technical Resources and Education at the ACS. Preliminary work already has begun on setting up the program nationwide, Chapman says. He adds the initial model material are expected to be available by early 1996.

### ACS Congressional Fellowships

The ACS's Congressional Fellowship Program places a person with a background in science and public policy in the office of a US Senator, Representative or congressional committee or subcommittee. During the year-long Fellowship, this person is responsible for providing the office in which he or she serves with a sound, objective scientific basis for policy decisions. The Fellow also increases ACS visibility on Capitol Hill, and provides the Society's membership with insights gained during the Fellowship. ACS fully funds a stipend for the Fellow, but other sources of funding may be acceptable. The 1995-1996 stipend is \$43,700. The next Fellow to be selected will begin in September 1995.

Fellows are selected on a competitive basis from among members of the ACS who have significant familiarity with one of the chemical sciences or engineering; a working understanding of the chemical community; and experience in civic activities or public affairs. Past involvement in ACS activities also is taken into account. A candidate for the Fellowship must submit a letter of intent and a resume to the ACS. In addition, two letters of recommendation are to be sent directly to the ACS by their authors.

The ACS Committee on Chemistry and Public Affairs (CCPA) Congressional Fellowship Subcommittee and the ACS Department of Government Relations and Science Policy maintain ongoing contact with the Fellow and congressional offices. The Fellow is required to report regularly to CCPA and meet with other Society groups as necessary to provide for an adequate flow of information. The American Association for the Advancement of Science's (AAAS) Congressional Science and Engineering Fellowship program provides an orientation session for the Fellow.

**Deadline:** January 1, 1995. For further information, contact Caroline Trupp at the ACS Department of Government Relations and Science Policy, 1155 Sixteenth Street, NW, Washington DC 20036 or phone (202) 872-4467.

### Iota Sigma Pi Awards

Iota Sigma Pi is a national honor society for women in chemistry and related fields. Each year the society offers a number of awards to women in chemistry. Nominations for three of these awards is due by February 15, 1995. The awards include: 1) the Anna Louise Hoffman Award for Outstanding Achievement in Graduate Research, 2) the Undergraduate Award for Excellence in Chemistry and 3) the Gladys Anderson Emerson Scholarship (undergraduate in chemistry or biochemistry). (If you need information about these programs, please contact the editor. My addresses are located on the inside front cover.)

## Career Transition Resources

The Section has order copies of two video tapes from the ACS Department of Career Services. These tapes may be checked out by anyone interested in seeing them.

**"Career Transitions: Catalyst for Change"** examines the crucial self-evaluation that must take place when chemists face voluntary or involuntary job changes. This tape encourages you to take a closer look at your professional skills to determine what you have to offer the market. It also encourages you to take a closer look at your professional values to determine what motivates you on the job. In addition you will hear success stories from ACS members who have made career transitions and tips from recruiters and consultants on the importance of networking.

**"Formula for Success--Turning Job Leads into Gold"** shows how to make the most of a wide array of job searching tools: library research; a resume and cover letter; computer networks; personal networking; and a variety of specialized career services provided to members by ACS. This tape also explains what industry recruiters are looking for and how to access the unpublished job market.

Also available is a publication **"Tips on Resume Preparation"**. The table of contents includes: Resume Writing Tips, Components of a Resume and Curriculum Vitae, Active Verbs for Resumes, The Chronological Resume, The Functional Resume, The Combination Resume, The *Curriculum Vitae*, SF-171 (the job application used by the Federal Government), The Cover Letter, Targeting the Market, Suggested Readings and ACS Career Services. There are many examples of resumes and cover letters.

Other ACS resources may be requested directly by e-mail from: career@acs.org.

Until a better location can be found to keep these resources, contact, Bill Switzer, 515-2945 or bill\_switzer@ncsu.edu to arrange to borrow them.

### The TarHelium--What Next?

by Bill Switzer

On Thursday, December 15, 1994 at 4:00 p.m. all members interested in the future of *The TarHelium* are invited to attend a meeting in the north building of Burroughs Wellcome on Cornwallis Dr in the Research Triangle Park. I have agreed to continue with the publication through the end of this publication year, but feel that I must relinquish the job at that time. As you may have noticed some of the publications have been arriving a bit late. This is a sure sign that the editor is getting tired. However, there is an even more pressing reason. Since I have agreed to co-chair the 1998 Southeastern Regional Meeting, it is absolutely necessary that I give up my position as editor. If you wish to work with this publication or have ideas about how it might evolve, please plan to attend. If you cannot attend, but would like to express opinions or offer suggestions, please contact me at: 515-2945 or bill\_switzer@ncsu.edu.

### TMMDG Meeting

**Abstract:** The perturbation of water structure close to biomolecules gives rise to thermodynamic contributions to free energies of stabilization, association, and substrate binding. Water perturbation close to non-polar groups gives rise to the so-called hydrophobic interaction. Recent developments in neutron scattering instrumentation and techniques now allow us to probe directly possible water perturbations close to non-polar groups. The results suggest the conventional wisdom of the hydrophobic effect is significantly wanting. (see p. 1 for time and location.)