

# THE NUCLEUS

May 2006

Vol. LXXXIV, No. 9



## Monthly Meeting

*Education Night at Northeastern U.*

## Esselen Award Address

*By Prof. Richard DiMarchi*

## 2<sup>nd</sup> Annual NESACS Golf Tournament

*Announcement and Application*

## 2006 NESACS Election

*Candidate Statements*

# 2<sup>nd</sup> Annual Northeastern Section ACS Golf Tournament

All proceeds from this tournament  
will go to support NESACS programs <http://www.nesacs.org>  
This event is co-sponsored by the Women Chemists Committee

**June 1, 2006**  
**Breakfast 7 AM, Golf 8 AM**  
**Stow Acres Country Club**  
**58 Randall Rd., Stow, MA**  
<http://www.stowacres.com>

## Rules

This is a best ball scramble, shotgun start. One drive from each player must be used per 9 holes. There is only room for 72 golfers, so get your entries in early and avoid being shut out.

## The Event

Your entry fee covers:

Greens fee and Cart

Prizes including longest drive (men and women), straightest drive, closest to the pin and first, second and third place

Continental breakfast before golf

Lunch buffet after golf

A cash bar will be available before and during lunch.

Questions? Contact Amy Tapper at [amy.tapper@peptimmune.com](mailto:amy.tapper@peptimmune.com) or Harry Mandeville at [harry.mandeville@peptimmune.com](mailto:harry.mandeville@peptimmune.com).



**Reserve an individual golfer or a full foursome. We will fill partial foursomes**

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Team leader or individual golfer	
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This form is also available at [www.nesacs.org](http://www.nesacs.org)

**Prior to May 1, \$110 per golfer, \$75 for students. After May 1, \$120 per golfer**

**Please send a check along with this form to  
(sorry, no credit cards)**

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23 Cottage St.  
Natick, MA 01760**

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## THE NUCLEUS

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# Noyce Scholars Program

*Funded by National Science Foundation to Train Teachers for City Schools*

By Ed Hayward

A new University of Massachusetts Boston project designed to prepare teachers of math and science for work in the Boston Public Schools has received funding from the National Science Foundation that will support 39 graduate and undergraduate students in their teacher preparation studies over the next three years.

Building on the university's model urban teacher training program, Teach Next Year, the Noyce Scholars Program will focus on undergraduate and graduate students preparing to meet the high demand for subject-trained math and science teachers in the classrooms of the 21st century.

"We're delighted the NSF has funded this program," said Professor Lisa Gonsalves, a member of the team that secured the grant. "The university has established an award-winning collaboration with the Boston Public Schools and the Graduate College of Education has a proven record of preparing teachers for urban classrooms.

As with the seven-year-old Teach Next Year program, which successfully guided graduate students through courses and internships at the secondary Dorchester Education Complex and sent 19 teachers on to the BPS, the Noyce Scholars will focus on the critical need for trained math and science teachers in urban school systems.

In Massachusetts, more than 30% of the newly-hired math teachers are not licensed to teach the subject, as are 29% of their science counterparts, according to the Massachusetts Department of Education.

The \$500,000 Noyce NSF grant

# NESACS Students Win Awards in Germany

By Morton Z. Hoffman

Dan Killelea, a graduate student in the Chemistry Department of Tufts University, received a third place award for his oral presentation at the Eighth Young Scientists' Conference on Chemistry (*Frühjahrssymposium*), which was organized by the Younger Chemists Committee (*Jungchemikerforum-JCF*) of the German Chemical Society (*Gesellschaft Deutscher Chemiker-GDCh*) in Konstanz, Germany, March 16-18, 2006. Killelea, a graduate student of Prof. Arthur Utz, spoke on "Controlling Surface Chemistry via Selective Excitation of Rovibrational States."

Two other NESACS students received certificates citing the exceptional quality of their research posters: Vikki Tsefrikas, a graduate student in Prof. Lawrence Scott's laboratory at Boston College, on "Progress Toward the First Chemical Synthesis of a Single Walled Nanotube" and Leland Johnson, a graduate student at Boston University with Prof. James Panek, on "Expansion of [4+2] Annulation Strategies." ♦

will assist 18 graduate students and 21 undergraduate students with tuition, fees and other expenses during their studies and assist graduate students during their internship year in a Boston Public School. Eligible candidates will have at least a 3.0 GPA, demonstrated strength in mathematics or science, and an interest in and commitment to teaching.

The goal of UMass Boston's Noyce Scholars Program is to increase the number of qualified Science, Technology, Engineering, and Mathematics (STEM) graduates who are qualified to

## Golf Tournament - Osmium Level Donor

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teach mathematics or science in the Boston area during the next three years. The program will work in partnership with Boston schools so that teacher training and professional development programs meet the needs of the city and the state.

The Noyce Scholars team consists of Graduate College of Education faculty Lisa Gonsalves, Assistant Professor of Literacy and Assessment, and Jorgelina Abbate-Vaughn, Assistant Professor in Curriculum and Instruction; College of Science and Math faculty Brian White, Assistant Professor of Biology; and Marietta Schwartz, Associate Professor in Chemistry. Alison Skerrett, of the GCOE, will serve as project coordinator. ♦

# Monthly Meeting

*The 870th Meeting of the Northeastern Section of the American Chemical Society*

## Education Night

Thursday, May 11, 2006

Northeastern University, 360 Huntington Avenue, Boston, MA

5:15 pm **Social Hour**, (Ballroom on the second floor of Curry Student Center)

6:00 pm **Dinner**

7:00 pm **Award Meeting**, Dr. Patricia Mabrouk, NESACS Chair, presiding

**Address: Nano-Structured Electrically Releasing Epoxy Adhesives-**  
Dr. Michael Gilbert, EIC Laboratories, Norwood, MA

7:45 pm **Presentation of Awards**

Philip L. Levins Memorial Prize  
James Flack Norris/Theodore William Richards Awards  
Undergraduate Research Fellowships  
Undergraduate Grants-in-Aid  
Undergraduate Research Symposium  
Project SEED Students  
Excellence in Teaching at the Secondary School Level  
Induction of New Members into *Aula Landis*  
Avery A. Ashdown Chemistry Examination Awardees  
Simmons College Price

**Dinner reservations should be made no later than noon, Friday, May 5th.** Please call or fax Marilou Cashman at (800) 872-2054 or e-mail at MCash0953(at)aol.com. Reservations not cancelled at least 24 hours in advance must be paid. Members, \$30.00; Non-members, \$35; Retirees, \$20; Students, \$10.

### THE PUBLIC IS INVITED

Public transportation is strongly suggested. Take the Green Line E train to the Northeastern stop, or the Orange Line to the Ruggles stop. Follow signs to the board room or ballroom from there. Or, take the Orange Line to the Mass Ave stop and go up the stairs at the west end of the platform, go through the turnstile and turn right onto the pedestrian overpass. Then make a left at the bottom of the stairs near the Gainsborough Parking Garage. Visit: <http://www.campusmap.neu.edu> for a map of the Northeastern University Campus. A limited amount of parking will be allotted in the Gainsborough Parking Garage. Please contact Marilou Cashman for a parking pass if necessary. Anyone who needs special services or transportation, please call Marilou Cashman a few days in advance so that suitable arrangements can be made.

## Biography

Michael Gilbert was born in Nashua, New Hampshire. He received a B.S. in Chemistry in 1980 from Rensselaer Polytechnic Institute in Troy, New York and a Ph.D. in Polymer Science and Engineering in 1987 from the University of Massachusetts at Amherst. From 1982 to 1995, Dr. Gilbert was

employed as a research chemist at the Army Materials Laboratory in Watertown Massachusetts. He specialized in research on adhesives and coatings. During this time, Dr. Gilbert elucidated the mechanism of the dicyandiamide cure of epoxy resins using model compounds and developed a diepoxide containing a chemically cleavable linkage, which permits the digestion of

## Abstract

In addition to low cost, adhesive bonding offers many advantages including the ability to join dissimilar materials, the formation of a sealed and aesthetically pleasing joint and the uniform distribution of stresses across that joint. However, bonds formed with structural adhesives are essentially permanent. No simple, non-destructive method exists for the disassembly of adhesively bonded manufactured goods, severely hampering such operations as repair, refurbishment and, of increasing importance, end-of-life recycling. For this reason, design for the environment (DfE) strategies promote the use of mechanical fasteners over adhesive bonding whenever possible.

The recent development of electrically releasing adhesives by EIC Laboratories, Inc., goes far in overcoming this deficiency. Capable of forming strong bonds between metal substrates

*Continued on page 8*

network polymers into readily characterized fragments, allowing the effects of network formation on epoxy cure reactions to be evaluated.

From 1995 to the present, Dr. Gilbert has been employed as a senior scientist at EIC Laboratories, Inc., where he has performed research leading to the development of a number of novel coatings and adhesives, including the invention of electrically releasing epoxies. This patented technology forms the basis for several commercial products manufactured and marketed by EIC Laboratories. Dr. Gilbert has continued this effort with the recent development of new formulations exhibiting enhanced properties for more demanding environments.

Dr. Gilbert received the 2000 Technology Innovation Award from Aviation Week and Space Technology and the 2005 ACS Northeast Regional Industrial Innovation Award for the development of Electrically Releasing Adhesives. Dr. Gilbert currently lives in Brookline, NH with his wife Teri and their three children Michelle, Alexander, and Benjamin. ◇

## ACS SHORT COURSE

Designed to improve the skills and marketability of practicing B.S., M.S., and Ph.D. chemists. The NESACS Committee on Continuing Education is pleased to sponsor this new National ACS Two-Day Short Course, at a registration fee about half of that charged at National ACS Meetings.

### Introduction to Drug Metabolism: Role and Practice in Drug Discovery

This Short Course is designed for scientists and managers in the medicinal, analytical and drug metabolism fields of the chemical and pharmaceutical industries who want to learn about the applications of drug metabolism and registration.

Attendees should have a basic understanding of organic and analytical chemistry and of biochemistry.

**DATES and TIME:** Thursday, May 18, 2006; 8:00 a.m. – 5:00 p.m., Room 333  
and Friday, May 19, 2006; 8:30 a.m. – 3:00 p.m., Room 448

**PLACE:** Curry Student Center, Northeastern University, 360 Huntington Ave., Boston, MA

#### KEY TOPICS TO BE DISCUSSED:

Optimal ADME properties of a drug candidate;  
Common biotransformation reactions and enzymes;  
Optimization of lead compounds from the drug metabolism perspective;  
Assessment and minimization of structural liabilities associated with drug metabolism;  
Typical drug metabolism experiments for drug discovery and registration;  
Regulatory consideration and PhRMA perspective on drug metabolism;  
Application examples.

#### PROGRAM AGENDA:

Roles of physicochemical properties, disposition, transporters (e.g. Pgp, MRP2) and pharmacokinetics in drug discovery;	Determination of metabolic stability, soft-spot characterization, and metabolite identification;
Common metabolic reactions (types and mechanism);	Strategy and methodology for screening for and minimizing reactive metabolites;
Common metabolism enzymes (CYP, UGT, SULT);	Identification of metabolism enzymes: avoiding single enzyme-mediated pathways;
Typical chemical moieties that form reactive metabolites;	Assessment of CYP inhibition potential for lead selection.
Polymorphism and metabolizing enzymes;	
CYP inhibition and induction;	
<i>In vitro</i> metabolism and models and analytical tools;	

**INSTRUCTORS:** Donglu Zhang is a Senior Research Investigator at Bristol-Myers Squibb whose research interests include identification of metabolites and metabolism enzymes, investigative metabolism, LC/MS, bioactivation mechanism, microbial biotransformations and their application to drug discovery.

Mingshe Zhu is a Senior Research Investigator in the Biotransformation Group at Bristol-Myers Squibb whose principal responsibilities are drug metabolism support to discovery and development programs, development of LC/MS and other new analytical methodologies, and investigation of drug metabolism issues.

#### PRE-REGISTRATION REQUIRED – Registration Fees:

ACS Members if **received** before May 3 ..... \$500.00; if **received** after May 3 ..... \$595.00

Non-ACS Members if **received** before May 3 ..... \$600.00; if **received** after May 3 ..... \$695.00

There will be a limited number of scholarships for unemployed ACS Members on a space-available basis.

Parking Fee: about \$14.00/day

University cafeterias will be available for lunches.

For further information contact: Marilou Cashman, NESACS Office, e-mail: mcash0953@aol.com  
phone: (508) 653-6329

**Short Course Registration form: *Introduction to Drug Metabolism: Role and Practice in Drug Discovery*. May 18-19, 2006**

Name: \_\_\_\_\_ Business Affiliation: \_\_\_\_\_

Mailing Address \_\_\_\_\_ Telephone: \_\_\_\_\_

(Circle: Home or Work) \_\_\_\_\_ E-mail: \_\_\_\_\_

Mail with remittance to: Prof. Alfred Viola, Chair  
Committee on Continuing Education  
NESACS  
23 Cottage Street  
Natick, MA 01760

Please make checks payable to NESACS  
(Sorry, we cannot accept credit cards or purchase orders.)

# Medicinal Chemistry Symposium

## *New Trends in Oncology*

Organized by the Medicinal Chemistry Group  
of the Northeastern Section, American Chemical Society

**Thursday – May 18th, 2006**

**Holiday Inn**, 15 Middlesex Canal Park Road, Woburn, MA

3.00 pm Refreshments

3.15 pm **Welcome**  
Raj Rajur, Program Chair

3.20 pm **Introductory Remarks**  
Norton Peet, North Andover, MA

3.30 pm **“Orally Active, Irreversible Inhibitors of Human Epidermal Growth Factor, Receptor-2 (HER-2) Kinase”.**  
*Hewi-Ru Tsou, Chemical & Screening Sciences, Wyeth Research, Pearl River, New York*

4:30 pm **“Targetting Histone Deacetylase: Development of Vorinostat (SAHA) for Treatment of Cancer”**  
*Paul Secrist, Cancer Biology & Therapeutics, Merck Research Laboratory, Boston, MA*

5.30 pm Social Hour

6.30 pm Dinner

7.45 pm **“IAP Antagonists”**  
*Christopher Straub, Novartis Institutes for Biomedical Research, Cambridge MA*

Dinner reservations should be made **no later than 12:00 noon on Thursday, May 11, 2006**. To make reservations, please contact Marilou Cashman at (800) 872-2054 or (508) 653-6329 or [mcash0953@aol.com](mailto:mcash0953@aol.com). Reservations not canceled at least 24 hours in advance must be paid. Members, \$28.00; Non-members, \$30.00; Retirees, \$15.00; Students, \$10.00. Anyone who needs handicapped services/transportation, please call a few days in advance so that suitable arrangements can be made.

**A. From Boston - Cambridge - Points North:** Take Route I-93 to Route 95/128 West. After 1 mile, take Exit 35 South to Route 38 (Main Street).

\*After about 500 feet at the traffic light, turn right into Middlesex Canal Street to the hotel entrance.

**B. From the West:** Take Route 95/128 North to Exit 35 South (Route 38 - Main Street. Follow directions from \* above.

**THE PUBLIC IS INVITED**



# Summer-Thing 2006

## *The Alternative to the Boston Red Sox*

After a very disappointing allotment of tickets to a Boston Red Sox game for part of this year's SUMMERTHING 2006, members of the Board of Directors (led by Dr. Hoffman) came up with the fabulous idea of having our baseball games but using, instead of the Bosox, our minor league affiliates located within a reasonable drive from Boston (50 mi or less, 60min or less). These teams include: Pawtucket Red Sox (44 mi, 45 min); Lowell Spinners (26 mi, 35 min); North Shore Spirit (11 mi, 18 min); Worcester Tornadoes (44 mi, 50 min); Nashua Pride (45 mi, 45 min); Brockton Rox (23 mi, 30 min); and New Hampshire Fisher Cats (50 mi, 60 min).

Additionally, prices are inexpensive enough that you can take the whole family to the ballpark for about the price of one Boston Red Sox ticket. We have concentrated on weekends when most people would be free. Concessions (hot dogs, soda, coffee, pizza, etc.) are also so much cheaper than in Boston. And parking - most fields have adjacent free street parking, along with garages and open lots where the cost is \$2-4 rather than \$20-25. We have tried to select a variety of venues and dates that should satisfy most everyone. We would like to go as a group to each of the games listed below. If, for some reason you cannot make some of the dates, we have provided a telephone number and a web site address so you can obtain information and a home game schedule and then make your own personal arrangements.

### ***Pawtucket Red Sox - AAA***

vs. Buffalo Bisons  
Sunday, April 23, 1:05 pm  
(McCoy Stadium - Exits 2A (MA) or 29 (RI) off I95)

### ***Worcester Tornadoes - A***

vs. New Jersey Jackals  
Sunday, May 28, 2:05 pm

*Continued on page 26*

# Hoffman To Receive Outstanding Professional Achievement Award

Morton Z. Hoffman, Professor Emeritus of Chemistry at Boston University, will receive the 2006 Hall of Fame Outstanding Professional Achievement Award from the Alumni Association of his alma mater, Hunter College of the City University of New York, according to Jane Oppenheim, a member of the Board of Directors.

Hoffman, a graduate in the class of June 1955 as a chemistry major, will receive the award at the 136th annual Birthday Luncheon of the Alumni Association at the Sheraton Hotel in New York City on Saturday, May 6. He will be presented to the elected 2006 Hall of Fame members on Friday evening, May 5, at Hunter College by Jennifer J. Raab, its president.

The Hall of Fame was established in 1972 to recognize Hunter graduates who have made significant achievements and contributions to society. Hoffman was elected to the Hall of Fame in 1977; recipients of the Outstanding Professional Achievement Award are chosen from among members of the Hall of Fame. Previous awardees include Nobel Laureates Rosalyn Yalow and Gertrude Elion.

A graduate of the Bronx High School of Science, Hoffman went from Hunter College to the University of Michigan, where he received the Ph.D. degree in physical chemistry in 1960. He then spent a postdoctoral year at Sheffield University, England, and joined the faculty of Boston University in 1961. The author of almost 200 published papers with his graduate and undergraduate students, postdoctoral associates, and visiting scholars in the peer-reviewed chemical literature in the area of the photochemistry and photophysics of transition metal coordination compounds, Hoffman was elected a Fellow of the American Association for the Advancement of Science in 1992. He received the 1994

Metcalf Cup and Prize for excellence in teaching from Boston University, the 2002 Responsible Care® Catalyst Award for excellence in chemistry teaching from the American Chemistry Council, the 2003 John A. Timm Award for encouraging young people in the study of chemistry from the New England Association of Chemistry Teachers, and the 2005 James Flack Norris Award for Outstanding Teaching from the Northeastern Section of the American Chemical Society. He was the 2002 chair of the Northeastern Section, the 2005 chair of the Division of Chemical Education of the American Chemical Society, and is currently a Councilor for the Northeastern Section and a member of the American Chemical Society Committee on Education. In 2004 he was appointed U.S. National Representative to the Committee on Chemistry Education of the International Union of Pure and Applied Chemistry. ◇

## Action Item

# Call for Nominations

## Henry A. Hill Award for Outstanding Service to the Northeastern Section

Nominations for the Henry A. Hill Award for Outstanding Service to the Northeastern Section are invited. Nominations should be sent by July 1, 2006 to the Administrative Secretary, NESACS, Marilou Cashman, 23 Cottage St., Natick, MA 01760. A resumé of professional activities and description of the nominee's service to the Northeastern Section should be included. The Award is presented at the October meeting of the Section.

## Abstract

*Continued from page 5*

(>3000 psi in shear), these adhesives release their grip when a low power current (10-50 volts d.c.) is applied across the substrates. The current induces electrochemical reactions at the adhesive metal interface, which greatly weaken the bond. Within seconds the substrates can be snapped apart. The process is efficient, typically requiring less than 1 milliamp/cm<sup>2</sup> of bond area. There is no heating of the bond and no generation of gaseous or liquid wastes. The positive metal substrate is left free of adhesive and is immediately ready for reuse. Currently available as commercial products, electrically releasing adhesives find use for both permanent and temporary bonding and can be employed to construct lightweight, inexpensive, highly adaptable release devices that are used in diverse applications.

The approach used in the formulation of electrically releasing adhesives will be presented. A key feature of this technology is the development of self-structuring epoxy resins. Comprising a blend of amine-cured epoxy and a block copolymer, this resin undergoes a sequential phase separation during cure, leading to the formation of co-continuous networks of rigid epoxy and an electrolyte containing second phase material. Separated on the nano-scale, the epoxy network provides mechanical strength to the adhesive bond, while the second phase material provides a level of ionic conductivity sufficient to support Faradic reactions at the adhesive/metal interface. The presentation will provide a discussion of the properties and applications of the electrically releasing adhesives, as well as potential applications for this unique nano-structured material. ◇





# Martin Freier

## 1935-2006

American Chemical Society member and writer Martin Freier died on January 7<sup>th</sup>, 2006 from pancreatic cancer. He is survived by his wife, his two daughters, his brother, and nieces and nephews in New Jersey, New York and California.

Martin was born in Michalovce, Czechoslovakia in 1935 the fourth of five children to Anna and Joseph Freier. He was a Holocaust survivor and studied the violin during his early years before coming to New York in 1949. He learned English and excelled in science and music in high school and graduated from Talmudical Academy in three years. He was accepted early into the honors program at Brooklyn College, where he further developed his love of science and technology. He graduated with honors with a B.S degree in Chemistry in 1958.

He worked for three years as a chemist in the pharmaceutical and food industries, and then began to take night classes in technical writing at New York University. His technical writing career took off, and after several years of working for large electronics corporations, he was recruited into management at Raytheon Corporation in 1967. He relocated to the Boston area. As a program manager at Raytheon, Martin worked under security clearance with the military and scientists and specialized in radar, computers, and air traffic control landing systems. Martin was an award-winning technical writer and was on the board of the Massachusetts chapter of the Society of Technical Writers. He received his MS in Engineering Management from Worcester Polytechnic Institute in 1978.

Martin retired from Raytheon after 25 years of service in 1992. He began a second career as a consultant and writer. In addition to his consulting projects, he was a contributing columnist to the MetroWest Daily News for 2 years. He also had a radio program



where he interviewed local personalities and authors that aired on Framingham State College's radio station and its broadcast channel for the blind.

In 2002, Martin rediscovered his interest in chemistry and became an active member of the American Chemical Society. In 2004 he became a contributing writer to the Northeastern Section's monthly newsletter, *The Nucleus*, writing on topics including stem cells, genomics, obesity, homeland security, fuel cells, nanotechnology and alternative fuels. Martin was deeply interested in expanding his knowledge by interviewing leaders in cutting edge uses of chemistry and then sharing this newly acquired knowledge with the readers of *The Nucleus*.

In Martin's personal life, he was an active member of Temple Israel of Natick where he was a Trustee, and he donated his services as the cantor at the Chabad Center of Natick for 18 years. He also was a volunteer for the Brockton chapter of the Service Corps of Retired Executives (SCORE), where he advised clients on small business issues from financing to sales for 15 years. He published a book of poetry called *Hidden Truths* and wrote his memoirs chronicling his early years in Europe during World War II. He was a devoted father and husband.

(Editors Note: Background information provided by Pearl Freier. Back issues of *The Nucleus* are available as

# NESACS

## Members to Run for ACS Governance Positions

Three NESACS members will be candidates in this year's ACS elections. Bassam Shakhshiri (University of Wisconsin, Madison), an honorary member of the Section, was selected by the ACS Council in Atlanta as a candidate for 2007 President-Elect; he will be opposed by Bruce Bursten (University of Tennessee). In an earlier vote, Councilors selected Tom Gilbert (Northeastern University) and incumbent Anne O'Brien (Wyeth-Ayerst Research) as candidates for District I Director for a 2007-09 term. The Committee on Nominations and Elections announced in Atlanta the selection of six candidates for the three Director-at-Large positions that are open for a 2007-09 term, one of whom is Dorothy Phillips (Waters Corporation); the other candidates are Jack Breazeale (Francis Marion University), incumbent Dennis Chamot (National Research Council), Peter Dorhout (Colorado State University), Paul Jones (University of North Texas), and Valerie Kuck (Bell Laboratories).

The ACS elections will be held in the Fall. All ACS members will vote for President-Elect, members in District I will vote for its Director, and Councilors will vote for the Directors-at-Large. ◇

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*Adobe Acrobat files at the Northeastern Section's website:*

[http://www.nesacs.org/TheNucleus/the\\_nucleus.html](http://www.nesacs.org/TheNucleus/the_nucleus.html). Martin's first article appeared in Vol.1 83, Issue No. 3, and his final article appeared posthumously in Vol. 84, Issue No. 6.) ◇

# The Origin of the Gustavus John Esselen Award

By Myron S. Simon, Ph.D.

In March, 1985, while I was Chair of the Northeastern Section, Arthur Obermayer, a trustee and former Section chair, told me that he had been approached by Mr. Gustavus Esselen III, who had asked whether the Section would consider establishing an organic chemistry award in honor of his father, Dr. Gustavus John Esselen, Jr. Esselen had originally been rejected by the national ACS when he contacted them about such an award. Esselen then telephoned Obermayer at the suggestion of a mutual friend and business associate, Henry Avery, to determine if such an award would be of interest to the Northeastern Section. Obermayer responded that there were already awards for excellence in organic chemistry, but that chemistry and chemists currently had a very bad public image, and perhaps an award could be given which communicated to the public the positive aspects of chemistry. Esselen agreed and expressed dismay that DuPont had removed the last two words from their slogan, "Better Things for Better Living ... Through Chemistry." Obermayer then amplified on this award idea in a letter to Esselen<sup>1</sup> and contacted me as chair of the Northeastern Section to initiate the process of getting Section approval.

I appointed a committee consisting of Truman Light, Arthur Obermayer, William Foye and myself to study the proposal and, with the further help of Edward Atkinson, reviewed the career of Dr. Esselen as it related to this Section. There was no question; Dr. Esselen's contributions had been many and important in the history of the Section. He had been an outstanding member of this Section, serving twice as Chairman, was a member of the American Chemical Society for 43 years, serving National ACS as councillor and director for many of those years. He had been the man the Section went to for help, the councilor who

solved the Section's problems as they arose, an eminence behind the throne, as it were. His work in this Section had been so meaningful that he was the only former Chairman to receive a scroll of commendation for his service, the James Flack Norris Honor Scroll, in 1948.

A meeting with Mr. Esselen took place on May 1, 1985, with the following NESACS members in attendance: Arthur Obermayer, William Foye, Alfred Viola and myself. At that meeting we agreed to go ahead with the award. The prize would honor the memory of Dr. Esselen and, with the Bhopal catastrophe fresh in our minds, the award would be given to a chemist whose scientific work had added to the public well-being. Other aspects of the award, the desire to encourage recent work, the decision to limit the award to chemists living in the United States or Canada, financial details, and the desirability of a ceremony akin to that of the Richards Medal Award were determined at that meeting.<sup>2</sup>

In the name of the Esselen family, Mr. Esselen provided a large sum of money so that the award might last "in perpetuity."<sup>3</sup>

Mr. Esselen suggested that, in addition to the monetary award of \$5000, he would like to see a bronze medal given, and, in memory of Dr. Esselen's work on polymers, that the medal be embedded in plastic. A picture of Dr. Esselen was provided. I asked friends in the art world of Boston to recommend a sculptor who could prepare such a medal and received the name of Lloyd Lillie, a very fine choice. Mr. Lillie set about reducing the photograph to a bas relief, and I did the reverse side of the medal on my computer.

The Award Committee, we decided, should represent multiple viewpoints. Accordingly, the Committee consists of four members elected

by the members of the Northeastern Section, one appointed by the president of the American Chemical Society, one appointed by the president of the National Academy of Sciences, and the Editor of Chemical and Engineering News. The Chair rotates among the four elected members of the Section. No elected member can serve more than two terms after the initial break-in period in the 80's.

The new award was announced in C&EN 4/21/1986, p. 72. The first solicitation for candidates for the award was in 1987. The notice began as follows: "The Gustavus John Esselen Award for Chemistry in the Public Interest was established by the Northeastern Section of the American Chemical Society in 1985. The award is a memorial to Dr. Esselen, a former outstanding member of the Section, and was made possible by a major gift from the Esselen Family. The goal of the award is to perpetuate Dr. Esselen's belief that chemistry is an honorable profession which contributes to the public good. The award will annually recognize a chemist whose scientific and technical work has contributed to the public well-being, and has thereby communicated positive values of the chemical profession. The significance of this work shall have become apparent within the five years preceding nomination, and the Awardee shall be a living resident of the United States or Canada at the time of nomination."

We knew that the early winner of the prize would set a pattern for the award, and the fine tuning began immediately. The first thing to be changed was the idea that "A chemist" would be the winner, for the very first award went to two men, Rowland and Molina, for their work on alerting the world to the possibility of loss of the ozone protective layer. And the second award, a year later, established that the award was gender-neutral, as Joanna Fowler shared the award with Alfred Wolf for their work in positron emission tomography.

The winners over the years have come from almost every branch of chemistry. As the years go by, the

*Continued on page 11*

# Esselen Award Address

## *Chemical Biotechnology as a Means to the Discovery of Optimized Protein-based Medicines*

Richard D. DiMarchi, Ph.D., Professor and Gill Chair of Biomolecular Sciences  
Department of Chemistry, Indiana University, Bloomington, Indiana 47405  
RdiMarch(at)Indiana.edu

Over the course of the last three decades there has been a steady increase in the power of the technology enabling the synthesis of peptide and proteins. Of equal importance has been the realization that nature did not evolve native amino acid sequence for pharmacological purposes and that better protein-based medicines could be obtained through sequence enhancement. While I have had the great fortune to work with peptides and proteins that have successfully found medicinal use in several therapeutic areas, the core of my contributions has resided in diabetes care.

I joined Lilly Research Laboratories early in 1981 to participate in the development of human insulin, what would become the first rDNA-derived protein approved for human use. It was a bold undertaking filled with a host of technical, financial, and emotional considerations. I came to the project having trained in two world-class laboratories focused on protein semisynthe-

sis and solid phase chemical synthesis. My interest in biosynthesis was embedded in the limitations I personally witnessed in producing large quantities of pharmaceutical-grade protein with these synthetic technologies. Additionally, it was relatively easy to see that rDNA biosynthesis would eventually be utilized as a medicinal chemistry tool.

The human insulin experience was seminal in providing the framework for future biosynthesis endeavors. In a relatively short period of several years this project advanced from the development of the core technology to biosynthesis of the first milligram and eventually to the commercial synthesis of hundreds of kilograms at a cost competitive with animal-sourced commercial drug. It is important to note that only a tiny fraction of present day

commercial bioproducts are produced at a scale that matches that of rDNA human insulin production in the early 1980s.

To satisfy the environmental safety regulations the first approach to biosynthesis of insulin required individual biosynthesis of the biologically inactive A & B chains followed by their combination through disulfide exchange to a properly folded native hormone. The significance of this undertaking is underscored by the fact that the total chemical synthesis of insulin had not produced more than a milligram of active hormone, and even that was of variable quality. The central synthetic limitation at that time and even today remains inefficient conversion of highly pure A & B chains to native insulin.

*Continued on page 12*

## Origin of Award

*Continued from page 10*

importance of this award has grown, and the Gustavus John Esselen Award for Chemistry in the Public Interest appears in the curriculum vitae of Nobel laureates and winners of some of the most noted chemistry and medical awards.

(I thank Arthur Obermayer for helpful additions to this report.)

### Notes

1. Letter: A. Obermayer to G.J. Esselen, III, March 18, 1985
2. Notes: Meeting with G.J. Esselen, III at MIT Faculty Club, May 1, 1985
3. Letter: G.J. Esselen, III to W.O. Foye, November 12, 1985 ◊

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## Esselen Address

*Continued from page 11*

Even seemingly established protein chemistry such as cyanogen bromide cleavage presented challenges at 1,000 liter scale that had been not observed previously at academic scale. Cyanogen bromide was not available at the required scale and had to be prepared immediately prior to use. Its oxidizing properties complicated the disulfide chemistry and initially generated a highly insoluble mixture of proteins that was virtually impossible to purify. Through the application of the newly established technology of high performance chromatography what seemed like an impossible undertaking steadily evolved to a process that could be conducted reproducibly at a commercial scale.

Human insulin proved to be a commercial success. The competitive process of producing human insulin by semisynthesis that was established by Novo was replaced later in the decade by a yeast-derived human insulin. The most important contribution of rDNA-derived human insulin was the fact that

it liberated the supply of insulin from the availability and variable quality of animal-sourced pancreas. The global epidemic of diabetes that is now well established could have precipitated a rationing of insulin to those in greatest need, a virtual return to the earliest days in commercial insulin supply.

To the medicinal chemist the most unsatisfying part of the human insulin experience was the size of the financial investment relative to the improvement in pharmaceutical performance. The change of a single alanine in porcine insulin for a threonine in human insulin represented the addition of a hydroxymethyl group to a protein of six kilodaltons. There was no improvement in glycemic control or hypoglycemic response derived from the movement from porcine to human insulin. In fact, no difference was anticipated, as the chemical, physical, and biological properties of human insulin are virtually indistinguishable from that of porcine insulin.

Our vision was that the completion of the human insulin project established the foundation upon which optimization of the hormone could be

introduced. There was much resistance to this thinking, derived internally from the business sector that saw little reason to repeat the expense of human insulin development. There was an equal degree of opposition to the concept of insulin analogs at the regulatory agencies. Their fear was primarily the uncertainty of the unknown and a core belief that any analog was destined to be more immunogenic than the native hormone. As painful as it was, having waited sixty years for the delivery of human insulin, it was simply too early to initiate an analog program.

Without support for insulin analogs, my attention focused on the biosynthesis of insulin-like growth factor 1 (IGF-1). It proved to be a seminal decision that later directed our work on insulin analogs. IGF-1 is a highly homologous hormone to insulin but possesses considerably greater anabolic potency and much less glycemic activity. We developed a novel chemical procedure for selective tryptophan peptide bond cleavage that served as a central step to the biosynthesis of IGF-1. An immediate observation that emerged from our early physical characterization of IGF-1 was the weak self-association behavior it exhibited relative to that of insulin.

Our attention was directed to an unexplained amino acid sequence inversion in the C-terminal end of the B-chain. In all insulin hormones sequenced from more than twenty species, the lysine residue at position twenty-eight is always preceded by a proline. Quite unexpectedly these two amino acids were reversed in IGF-1. We hypothesized that the inversion in sequence might be the source of the differing physical behavior. We furthermore hypothesized that IGF-1's binding to its circulating binding protein would be impaired if its own self-

*Continued on page 13*



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## Esselen Address

*Continued from page 12*

association were a competing event. Insulin being stored as an inactive hexamer in the beta cell of the pancreas would be equally compromised physiologically if its self-association was impaired.

The inversion of the native insulin amino acid sequence at positions 28, 29 to replicate that of IGF-1 provided an insulin of identical amino acid composition, isoelectric character, and molecular mass to that of the native hormone. The physical characteristics of the insulin analog were dramatically different than the native hormone. The self-association was much weakened, but not absent. The profile seemed ideally suited for development as a meal-time, fast-acting insulin. The low level of self-association was sufficient to facilitate formulation as a solution stable hexamer, but the weakened affinity translated to a rapid dissociation and a near-immediate initiation of *in vivo* biological activity.

Lys-Pro human insulin demonstrated its virtues in animal and human studies. Extensive toxicology studies illustrated that the interaction of the hormone at insulin target tissues was virtually identical to native hormone, but its altered physical character provided pharmacokinetics that were ideally suited for mealtime use as a subcutaneous injection. In carefully controlled clinical studies Lys-Pro human insulin has demonstrated improvement in glycemic control of nearly 50%, while lowering the prevalence of hypoglycemia by more than 30%. Additionally, Lys-Pro insulin is much more convenient in that it is used at the time of need as opposed to the ADA recommended instruction of 30-45 minute pre-injection for the native insulin. This insulin analog is presently used by millions of diabetics each day.

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More importantly it was a first in demonstrating that careful design can lead to non-native protein structures that are pharmaceutically superior to nature's own sequence.

My most recent work at Indiana University and a biotechnology start-up company in California named Ambrx has taken me full circle. The core technology developed by Pete Schultz has enabled the biosynthesis of proteins with non-native, pharmaceutically preferred amino acids. In 2003, Pete and I co-founded, with Troy Wilson, Ambrx as a means to enrich the technology and to develop the first rDNA-derived protein for human use that bears a non-native amino acid. I have termed this technology chemical biotechnology, since it represents biotechnology as we have come to know it over the last twenty-five years, but married to the structural diversity that has been restricted to synthetic and semisynthetic approaches. An important priority of our work at Indiana University is to deliver the third in a series of improvements in insulin therapy that started with native sequence and was followed by Lys-Pro insulin. Our objective is an insulin with sizably enlarged therapeutic index and without requirement for injection.

All that I have accomplished is a direct function of the training, direction and support I have received from a very large number of dedicated individuals. While the list is too numerous to identify all such individuals, it would be inappropriate not to recognize a few key individuals. Drs. Bruce Merrifield, Ron Chance, Gus Watanabe introduced me to peptide synthesis, insulin, medicine and chromatography. More important than their technical expertise was the highly individual manner in which they demonstrated utmost scientific integrity and a higher purpose to their professional activities. I am also deeply grateful for the administrative support I received from Mr. Steve Neal, Dr. Troy Wilson, and Ms. Teri Layton. Lastly, it has been the unconditional support I have received from my wife, daughters and extended family that has made all of this work possible and meaningful. ◇

## NESACS Election

### *Election of Candidates*

In the interest of providing maximum information and expression of opinion by the candidates for election in 2006, the Nominating Committee has prepared this section of the NUCLEUS for mailing concurrently with the ballots. All candidates were asked to submit biographical material and, with the exception of committee member nominees, position statements. To attain uniformity of format, the biographical data have been rearranged, and, where the text exceeded the allotted space, abbreviated. The statements have been reproduced without change. An official ballot, along with a ballot envelope and return envelope have been provided. The election and balloting are being carried out in conformance with Article VIII of the Constitution of the Northeastern Section. The order of candidates for each office on the ballot will be determined by lot. Comments regarding the election may be addressed to the Nominating Committee Chair, Dr. Amy Tapper (address on p.3).

**The ballot must be received by May 31, 2006.** ◇

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# NESACS Election

*Election of Candidates 2005*

## Chair-Elect

*Marietta Schwartz*



**Education:** 1983-1988: University of Wisconsin - Madison. Ph.D. Degree in Organic Chemistry was conferred in August, 1988. Dissertation title: "Synthesis and Study of Two Tribridged Cyclophanes". Research Director: Prof. Howard W. Whitlock, Jr.; 1979-1983: College of St. Benedict, St. Joseph, Minnesota. B.A. in Chemistry— was conferred in May, 1983.

**Professional Experience:** January 2004-Present: University Director of Undergraduate Education, University of Massachusetts Boston; 1994-Present: Associate Professor of Chemistry, UMass Boston; 1988-1994: Assistant Professor of Chemistry, UMass Boston; 1983-1988: Research Assistant/Teaching Assistant, University of Wisconsin Madison; 1982-1983: Undergraduate research, Department of Chemistry, College of St. Benedict, St. Joseph, Minnesota. Research: My original research area is physical organic chemistry. I still maintain a "wet" lab and am currently studying the synthesis and charge-transfer behaviors of a series of related dibridged cyclophane molecules. But over the past ten years or so, I have spent more and more time in the areas of chemical education and the use of technology. I also spent my most recent sabbatical acting as an elementary and middle-school science teacher, which definitely put my creative and organizational skills to the test.

**ACS Service:** Member of ACS

since 1980 (Student Affiliate, then Member). Hospitality Volunteer, 1989 National ACS Meeting, Boston.

**NESACS Service:** Volunteered for the Education Committee for a number of years. Sole coordinator in charge of recruiting and assigning student workers for the ACS National Meeting in Boston, August 1998 and again in August 2002. Secretary, Board of Publications, Northeastern Section of the American Chemical Society, October 1999 - December 2000; calendar year 2002. Chair, Board of Publications, Northeastern Section of the American Chemical Society, calendar year 2001 and 2003. Currently chair of the Norris Award Committee.

**Memberships, Honors:** American Chemical Society (Organic Division, Division of Chemical Education, Northeastern Section), Iota Sigma Pi national honor society (Member-At-Large), Association for Women in Science

**Statement:** NESACS has a long-standing tradition of excellence, both locally and nationally. I see the role of the Chair as twofold: first of all to maintain that tradition by careful administration of the Section, and secondly to expand that tradition by identifying new and innovative areas in which the Section can reach out to its members and to the community. With respect to the first area, I can cite many years of experience at multiple levels of administrative work, from committees to collegiate Senate to department chair, to my current position as Director of Undergraduate Education. I have worked with small and large groups of people, many of whom held wildly disparate opinions on the task at hand, and have always managed to accomplish what needed to be done in an efficient and collegial manner. I feel that these skills will be invaluable in the event that I am elected to the NESACS Board Chairmanship.

New and exciting areas of outreach are always difficult to identify, but

NESACS has a long history of managing to do just that, and once identified, we do an outstanding job of developing and maintaining those areas. During my tenure on the Board of Publications, we worked together to dramatically improve the Section's website in time for the most recent National ACS Meeting held in Boston. This was a challenge, but we rose to the occasion and I think that we should all be extremely pleased with the results. I hope to continue working on projects such as this, as I feel it is the role of the Chair to work with the membership to continue to identify such areas and to do our best to work together, to bring our expertise to the table and to the community

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## TREASURER

*James U. Piper*

**Education:** B.S. MIT; M.S., Ph.D. Emory University.

**Professional Experience:** Research appointments at Yale U. 1963-6, MIT 1966-7 and 72-3, Worcester Foundation for Experimental Biology 1979-80. Teaching appointments at New Haven College 1963-6, Simmons College 1966-2002. Currently Emeritus Prof.

**NESACS Service:** ACS Member since 1960. 1990 Hill Award. NESACS Treasurer Sept. 1977-present.

**Statement:** The Treasurer chairs the Budget Committee, is responsible for all Section funds except those of the Trust Accounts, and prepares reports for the Board of Directors, National ACS, and state and federal agencies. Audited financial statements are prepared by a CPA. The Section currently operates with a budget of \$265,000 of which 30% comes from Trust Funds, 35% from local and national dues, and 35% from program revenues. About 25% of all expenditures are related to awards which recognize achievements in chemistry at all levels, from high school students to professional chemists, including programs that encourage young people to

enter the profession. Administrative expenses constitute 10% of expenditures. The remaining 65% supports services to the membership such as the NUCLEUS, monthly meetings, symposia, continuing education activities, professional relations services including employment services, and public relations activities such as National Chemistry Week. The quality of these programs is high, and the major budgetary problems involve setting priorities among them. I am pleased to work with the members of the Board of Directors who volunteer many hours in the service of their profession.

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## AUDITOR

### *Anthony Rosner*

Anthony Rosner has been Director of Research and Education at FCER for the past 14 years, blending a large variety of tasks distilled from a multi-faceted background in basic research in biochemistry, clinical chemistry laboratory direction at a teaching hospital of Harvard, grants administration, teaching, journalism, and minority research program development. After obtaining his Ph.D. in Medical Sciences at Harvard in 1972 and conducting postdoctoral research at the NIH in Bethesda and at the CNRS in Gif-sur-Yvette, France, in 1973 and 1974, he directed research and clinical chemistry laboratories at Boston's Beth Israel Hospital, then taught chemistry and served as Department Administrator in Chemistry at Brandeis University and managed research operations in neonatology at Children's Hospital in Boston until he joined FCER. He chaired one of six charter committees at the inception of the National Center for Complementary and Alternative Medicine in 1992 and has served on the editorial board of three peer-reviewed journals, authoring papers reviewing chiropractic research, critiquing many recent publications of questionable research design, and exploring the role of homocysteine in provoking spontaneous vertebral artery dissection. He is the recipient of the

Humanitarian of the Year Award from the American Chiropractic Association in 2000 as well as an honorary degree from the National University of Health Sciences in 2002.

**Statement:** It has been almost two decades that I have been serving as Auditor for the Northeastern Section of the ACS and to have maintained the standards of accounting that should be but are unfortunately not always universally followed in today's corporate environment. It has been a particular source of satisfaction to have witnessed the growth of the Society over the past 20 years.

It will be my pleasure to extend my record of providing accurate and uncompromising service for the coming term.

---

## TRUSTEE

### *Joseph A. Lima*

**Education:** B.S. New Bedford Institute of Technology (1962); MBA, Babson College (1975)

**Professional Experience:** Current Career Position—Vice President, Technical and Operations for Houghton Chemical Corporation, Allston, MA.

**NESACS Service:** I've been a member of ACS since student affiliate days. My major involvements with the Northeastern Section have been with the Board of Publications for *The Nucleus* and currently as an NESACS Trustee and member of the Esselen Award Committee. Additionally, I've served on a number of ad hoc committees.

**Statement:** Our section is fortunate to have endowment funds available to support our many worthwhile activities. These activities benefit both our members and the "chemical community" in general. If re-elected as a Trustee, I will continue to work with the other Trustees to ensure our funds are invested conservatively, managed wisely and used responsibly. May I have your vote?

---

## Councilor / Alternate Councilor

### *Eva Binnun*

**Education:** Boston University, B.A. Chemistry, 2002; Northeastern University, currently pursuing M.S. Chemistry, part-time program

**Professional Experience:** Johnson & Johnson, PRD, Research Associate, 2002-2003; Wyeth Research, Scientist I, 2003-present

**Statement:** I am very honored to have been nominated for the position of NESACS councilor. As a relatively new member of the industry community, I am very excited to begin efforts toward expanding the newly founded Northeastern Section of the WCC, organizing new events, as well as actively recruiting new members from both industry and academia. Secondly, I would take initiative in helping to increase students' interest in chemistry at the undergraduate college level through organization of job fairs and recruitment at both local and national ACS meetings. I ask for your support and would be proud to serve as councilor for our section.

---

### *Edward J. Brush*

**Education:** Ph.D., Pennsylvania State University (1984); B.Sc., King's College, PA (1978)

**Professional Experience:** Associate Professor of Chemistry Bridgewater State College (1998-present, Chair 2006-present), co-coordinator of the BSC Adrian Tinsley Program for Undergraduate Research (2000-2005), coordinator of the BSC Chemistry Outreach Program (1999-present); Clark University Visiting Professor (1996-1998); Kutztown University (1995-1996); Tufts University (1988-1995); Postdoctoral Research Associate University of Maryland (1984-1988).

**NESACS Service:** BSC student affiliate co-advisor (1999-present, Honorable mention awards 2001-present, Green Chemistry affiliate 2003, 2005); currently developing a database of student affiliate groups in the north-

eastern section; NESACS Earth Day event coordinator; co-coordinator of the NESACS-sponsored Northeastern Undergraduate Environmental Research Symposium at Bridgewater State College (2002-present).

**Memberships:** American Chemical Society (Divisions: Chemical Education, Organic, Biochemistry, Environmental), Council on Undergraduate Research, American Association for the Advancement of Science, American Society for Biochemistry and Molecular Biology.

**Honors:** The V. James DiNardo Award for Excellence in Teaching at Bridgewater State College (2004); American Cancer Society Postdoctoral Fellowship (1986-1987).

**Statement:** It is a privilege to be nominated to serve as NESACS Councilor. As a 29-year member of ACS I have focused on providing research experiences and other professional opportunities for undergraduate students, and look forward to bringing these skills to the northeastern section. I would like to see an increased involvement of and collaboration between the regional student affiliates (undergraduate and graduate students) in sectional activities, particularly outreach to K-12 students and teachers. I will also work to expand on the already strong undergraduate research base in the section, with added opportunities for summer research experiences and conference travel. Finally, I will strive to have the section take a more active role in promoting green and sustainable chemistry in education, teaching and research. As councilor I look forward to the challenge of representing the interests and concerns of the students, educators, academic and industrial chemists of the Northeastern section.

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### **Michaeline F. Chen**

**Education:** Clarke College, B.A.; Boston College, M.S.

**Professional Experience:** 1985–1997, US Army Research Laboratory—Materials Directory, Chemist, Associate Primary Investigator, (Retired); 1998 – 2002,

Revet/Microbac Laboratories, Inc.—Consultant (Part time); 2001–Present, Wellesley College, Chem. Dept., Research Associate (Part time)

Member of ACS since 1976

**ACS Service:** 2000 – present, Member of the Council Committee on Admission; 1998 – 1999, Associate Member of the Council Committee on Admission; 1995 – present, Associate Member of the International Activities Committee; 1994, Member of the Economic and Professional Affairs Committee; 1989 – 1993, Member of the Economic Status Committee; 1988, Associate member of the Economic Status Committee; 1987-1988, Associate member of the Public Relations Committee.

**NESACS Service:** 1984 – present, Member of the Board of Directors NESACS; 1987 - present., Councilor of NESACS (except 2003: Alternate Councilor); 2001 - present: Chair of the Membership Committee; 1999 – 2000, Chair of International Chemistry Celebration for Y2K (NES); 1988 – 1998, Member of the Professional Relations Committee; 1998, Worked for National Meeting & Centennial Celebration in Boston; 1997, Recipient of Henry A. Hill Award; 1988 & 1995, Member of the Nominating Committee; 1982 – 1992, Served on and Chaired the Summerthing/Fallfest Committee; 1990, Member of the Organizing and Planning Committee for the ACS National Meeting in Boston, also served as Public Relations Chairperson; 1988, Chair of the Public Relations Committee; 1984 – 1987, Chair of the Hospitality Committee, including the IUPAC Meeting in Boston.

**Statement:** I have a strong sense of enthusiasm for the activities of the Northeastern Section and for the American Chemical Society. Because I serve on both the Admissions and International Activities Committees at the National ACS, and am Chair of the Membership Committee of the Local Section, I am able to represent the local section at the national level in a unique manner. If elected, I would continue to broaden the Northeastern

Section's influence on National ACS policy decisions, increase interactions between our Section and the National Society, and increase the involvement of the membership in its activities. If elected, I shall continue to devote my time and energy for the good of our members. I would truly be honored and grateful to receive your support and your vote so that I may continue to serve you as a Councilor.

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### **Mukund S. Chorghade**

**Education:** B.Sc. 1971; M. Sc. 1973 (1st Class Honors) University of Poona, India; Ph.D. (Organic Chemistry), 1982, Georgetown University

**Professional Experience:** Research Fellow, National Chemical Laboratory (1973-74); Instructor, Georgetown University (1981-82); Postdoctoral Research Assoc., University of Virginia (1982-84); Postdoctoral Research Fellow, Harvard University (1984-85); Senior Research Chemist (1985-89); Project Leader (1989-90), Dow Chemical Co.; Research Scientist/Assistant Director, College de France, Paris and Universite Louis Pasteur (1990-91); Project Manager, Abbott Laboratories, Pharmaceutical Research (1991-95); Senior Director, Chemical Sciences Research & Development, CytoMed, Inc. (1997-98); President, CP Consulting, Chorghade Enterprises (1995 to present); Visiting Scholar University of British Columbia, University of Chicago, Northwestern University and others; Vice President, Pharmaceutical Development Sciences, Geltex Pharmaceuticals / Genzyme, (2000 to 2003); President and Chief Scientific Officer, Pharmaceutical Sciences Division, D & P Pharmachem (2003-present).

**ACS Service:** Member since 1982. Chairman, Brazosport Section (1990); Organic Division, member; Chairman, Symposium on Industrial Chem., Great Lakes Regional Meeting, May, 1997; Visiting Speakers Program (1999 to present); Department of Career Services Consultant (2000 to present); Member, International Activities Committee (2003-present)

**NESACS Service:** Board of Direc-



tors (1997-), Public Services Committee, Chair; Professional Services Committee, member and chair (2005-); Public Affairs Committee; Public Relations Committee, Interim Editor (*The Nucleus* (2004)

Memberships, Honors: Maharashtra Academy of Sciences (Elected Fellow); Andhra Pradesh Academy of Sciences (Elected Fellow) IUPAC; Royal Society of Chemistry (Elected Fellow); New York Academy of Sciences; American Institute of Chemists (Elected Fellow); AAAS; Sigma Xi; Indian Society of Bio-Organic Chemists; IUPAC Commission on Biotechnology, Medicinal Chemistry, New Technologies and Special Topics, Titular member, Division of Chemistry and Human Health; 20<sup>th</sup> IUPAC Conference on the Chemistry of Natural Products, Chicago, 1996; Chair, Scientific Programs Comm., on Advisory Board for *Organic Process Research and Development*, *Chimica Oggi*; Member, Committees on Advanced Professional Thinking, International Activities and Technology, American Institute of Chemists. Reviewer of manuscripts for numerous leading professional journals. Awarded "Diamond Jubilee Fellowship", Univ. Dept. of Chemical Technology, Mumbai, India; Awarded "B.D. Tilak Distinguished Visiting Fellowship", Awarded "Bharat Gourav" Award, Government of India. "Alkyl Amines Padma Bhushan Prof. B.D. Tilak Chemcon 2002 Distinguished Speaker Award" Listed in American Men and Women of Science, Who's Who in Science and Engineering Actively involved with Indian Cultural Coordination Committee, Washington, D. C. Leadership roles in several community groups. Invited speaker at numerous international conferences.

**Statement:** It is a singular honor and privilege to have been nominated to the position of Councilor / Alternate Councilor for the Northeastern Section.

It will be my endeavor to effectively represent the Northeastern section effectively in the National Council. The issues confronting the Chemical

Enterprise in the USA and the ACS are complex and demand creative solutions. I will spare no effort in ensuring that the voice of our electorate is heard and that the council determines effective policies for all our members. Moreover, I will bring the benefits of membership to the members by participating and initiating creative programs.

### **Catherine E. Costello**

**Education:** A.B. (Chemistry), Emmanuel College; M.S. and Ph.D. (Organic Chemistry), Georgetown University

**Professional Experience:** Boston Univ. School of Medicine, is Prof. of Biochemistry and Biophysics and Founding Director of the BUSM Mass Spectrometry Resource and the Cardiovascular Proteomics Center; Associate Director of the MIT MS Resource (1975-1995).

**ACS and Other National Service:** At the national level, she is a Councilor for the Northeastern Section (1989-present; Alt., 1986-8), has served as a member (1996-2005) and chair (2004-2005) of the International Activities Committee and is currently a

member of the newly-formed Ethics Committee. She has completed many tours for the ACS Speakers Bureau. She served as President of the American Society for Mass Spectrometry (2002-4), is presently a member of the Council of the Human Proteome Organization, the Board of the Human Glycoproteomics Initiative and the US National Committee of IUPAC. She is a member of AAAS and the Society for Glycobiology, and serves on NIH review panels and several editorial and advisory boards. She is the author or coauthor of about 230 scientific papers.

**NESACS Service:** She currently chairs the NESACS Constitution and Bylaws Committee. She was a member of the NESACS Publications Committee (1988-1993) and its chair (1990, 1993) and has served five terms on the Nominating Committee

**Statement:** I wish to continue to serve as a Councilor for the Northeastern Section in order to keep the interests of our members before the National ACS, to provide input to national policies based on my experience with educational institutions,

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research funding programs and national and international exchange of scientists and information, and to increase access of our members to the wide resources available to support their work and careers. Although our research often straddles a wide range of activities, it is important that the ACS remain a central feature in our professional lives and in those of our students and colleagues. I strongly support collaborations among academic institutions and between academia and industry and will continue to encourage interdisciplinary research and training and to highlight new opportunities for chemists in diverse areas of work and study, at all stages of their education and careers.

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### **Angeles Dios**

**Education:** Ph.D., Graduate school of the City University of NY (1999); M.A., City University of NY (1994); B.S., Santiago de Compostela University (1990)

**Professional Experience:** Genzyme Corp., (2000-Present); Post-Doctoral Associate, Picower Institute of NY, (1999-2000).

**ACS Service:** Founding member and first president of the Younger Chemist Committee of the NY local section of the ACS.

**Statement:** I am excited to be nominated for the position of councilor/alternate councilor for the Northeastern Section. If elected, I will endeavor to represent the Northeastern section effectively in the National Council and will help ensure that all of our members are served by the Society and considered in its policies.

---

### **Wallace J. Gleekman**

**Education:** Bridgewater State College, B.S. (1951); Boston University, Ed.M. (1952); Walden University, Ph.D. (1982).

**Professional Experience:** Science Teacher (chemistry, physics, biology, oceanography); Wrentham H. S., King Phillip R.H.S., Brookline H.S. Retired 1995. Adjunct at Emerson College, Suffolk University. Current: Instructional Support Staff, Oak Hill Middle

School, Newton. Head Sailing Coach; Brookline H.S. (1972-1998); Commonwealth School (1992-); Winsor School (2000-).

**ACS Service:** Member since 1955. TV: Chemistry and Life Mechanisms, WHDH-TV, Ch. 5, Boston; ACS Speakers Bureau: Tours to New York (1980), North Central (1986), Gulf Coast (1987), Lake Lands (1988), Palmetto (1990), Mid-South (1995), Ozark (1999), Mid-West (2000), Carolina (2002).

**NESACS Service:** ACS Task Force on Education, Chair, Chemistry Education Committee; Chair, Summerthing; Chair, Northeastern Section (1981).

**Honors:** General Electric Science Fellow (1956); Lyman Newell Award (1962); Northeast U.S. Regional Award (1972); James B. Conant Award (1974); John A. Timm Award (1981); Mass Science Teacher Presidential Nominee (1985); Norfolk County Honor Award (1986); Mass Teachers Assn. Award (1988); *Aula Landis* Award (1989); Henry A. Hill Award (1989); Theodore W. Richards Award (1994).

**Statement:** On the local level, we should encourage member participation in monthly meetings and increase involvement by our membership on section committees to provide improved member services. On the national level, we should use our section's tremendous potential to influence ACS policy and activities.

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### **Robert B. (Barney) Grubbs**

**Education:** B. A., Pomona College (1993); M. S., Ph. D., Cornell University (1995, 1998).

**Professional Experience:** Assistant Professor, Department of Chemistry, Dartmouth College (2001-present); Post-doctoral researcher, Department of Chemical Engineering and Materials Science, University of Minnesota (1998-2001); Exchange Scholar, Department of Chemistry, University of California, Berkeley (1997-1998).

**Research Interests:** Polymer synthesis; block copolymers, free radical polymerization.

**ACS Service:** Co-organizer, "Poly-

mers, Nanoparticles, and Composite Materials in Nanoscience" Symposium, PMSE/POLY divisions, American Chemical Society Annual Meeting, Atlanta, GA, March 2006.

**NESACS Service:** NESACS member since 2001.

**Other Service:** Proposal Study Panel, The Molecular Foundry at Berkeley Lab (DOE), August 2005 – present; Co-organizer, Annual Materials Symposium, Dartmouth Nanomaterials Research Group, November 2004; Co-organizer, New England Polymer Chemistry Workshop, 2003-2004.

**Relevant Memberships:** ACS member since 1993 (POLY, PMSE, ORG, COLL divisions); American Physical Society since 2000.

**Honors:** NSF Career Award (2003); Research Corporation, Research Innovation Award (2002); 3M Non-tenured Faculty Award (2002-2004).

**Statement:** I would be honored to serve the Northeastern Section as a councilor and will do my best to communicate the needs and concerns of section members to the ACS. I also hope to facilitate more extensive interaction between chemists in the greater Northeastern region and the vibrant academic and industrial scientific community in the Boston area. Such interactions would ideally spur new efforts in educational outreach to the greater populace of the Northeastern region.

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### **Michael Hurrey**

**Education:** University of Central Florida, B.S., 1998; University of North Carolina – Chapel Hill, Ph.D., 2004

**Professional Experience:** Vertex Pharmaceuticals, Scientist I, Physical Sciences & Pharmaceutical Research, 2006-Present; Scientist I, Analytical Development, 2004-05

**ACS Service:** Younger Chemists Committee (voting), 2004-Present, Strategic Planning Subcommittee Chair, 2005-Present; YCC Liaison to Membership Affairs Committee, 2004-Present. *New England Section:* champion 1<sup>st</sup> annual golf tournament; *North Carolina Section:*, presenter NC State

Fair 2001-04

**Memberships and Honors:** ACS Member since 1999; *ACS Division: Analytical Chemistry*; Team VOCAP Award (2006); James T. Dobbins Fellowship (2003-04); RICHES Award of Excellence (2003); GAANN Fellowship (2002-03)

**Position Statement:** As an active national member of the ACS, I believe that it is important to remain focused on local section needs and concerns. Being a Younger Chemist, I find it equally important to express the viewpoints of chemists who are just starting in their careers. It is just as important, however, to represent areas of concern from Women Chemists, Senior Chemists, Chemist with Disabilities, or any chemist who wishes to express their opinion to the National ACS. I have been fortunate to serve my fellow chemists at the national level for two years and would like to continue in that role while expanding into new areas of the society. I enjoyed being active in my past local section and have been looking for an opportunity to serve NESACS. I believe that Councilor is one of the highest honors that can be bestowed on a local section member, as it gives a community a chance to influence policy and concerns of the society at large. I would like to serve NESACS as a Councilor so that I could feel like I'm giving back to my fellow local chemists. I would like to implore all members of NESACS to contact me with their thoughts and wishes when it comes to the society so that when deciding on matters important to the local section, I will be able to represent everyone to the best of my abilities. Please consider me for Councilor so that I may be your voice at the national meeting.

---

### **Jerry P. Jasinski**

**Education:** B.A., M.S.T., University of New Hampshire (1964, 1968); M.N.S., Worcester Polytechnic Institute (1968); Ph.D., University of Wyoming (1974);

**Professional Experience:** Keene State College: Assistant Professor (1978-83), Associate Professor (1983-

89), Professor (1989-), Chair, Department of Chemistry, (1999-). University of Virginia: Post Doctoral Research Associate (1974-75). Los Alamos Scientific Laboratory: AWU Pre-Doctoral Research Associate (1973-74), High School Chemistry/Physics Teacher (1964-70, 1975-78). American Institute of Chemists (AIC-Board of Directors 1999-01): (New England Institute of Chemists, NEIC, Treasurer, 1988-). Over 100 papers in chemical research journals.

**Research and Interests:** Physical-Inorganic Chemistry; Synthesis and X-ray crystallography of laser dye molecules and transition metal thiosemicarbazones. Co-developer of a web-based tutorial entitled "Symmetry and Space Groups". Introduction of Process Oriented Guided Inquiry Learning (POGIL) techniques into the chemistry curriculum.

**ACS Service:** Member since 1970. Member of INOR division. Nominating Committee (2000-01).

**Memberships and Honors:** American Crystallography Association (ACA), New England Institute of Chemists (NEIC), Council for Undergraduate Research (CUR), New England Association of Chemistry Teachers (NEACT); 1<sup>st</sup> Recipient of the Keene State College Award for Faculty Distinction in Research and Scholarship (2001).

**Statement:** Since joining the ACS in 1970, I have had only limited opportunity to serve while enjoying the many benefits offered. My experience at the undergraduate level in both teaching and research should serve as a catalyst and refreshing viewpoint to the continued development of chemical education, one of this section's most important assets. I would hope to bring my expertise in this area to the section and be an advocate of programs that promote and bring excitement to science and chemistry to young people as well as recognize the achievements of both graduate and undergraduate students in the chemical sciences within the Northeastern Section of the American Chemical Society. I would be a positive spokesman for

the continued development of educational programs for students at both the graduate and undergraduate level both locally and nationally and encourage further development of the student-mentor relationship.

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### **Patricia Ann Mabrouk**

**Education:** B.A. 1982 Wellesley; Ph.D. 1988 Massachusetts Institute of Technology

**Professional Experience:** NIH Postdoctoral Fellowship 1988-1900 Stanford University; Assistant Professor, Northeastern University (1990-1997); Associate Professor, Northeastern University (1997-2004); Professor, Northeastern University (2004-present)

**ACS Service:** Member since 1988. Associate member of ACS SEED National Committee (2003 – 2004); Associate member of Women Chemists Committee (2006); panelist for ANYL Kolthoff Awards (2004 – present); panelist for ANYL Giddings Award (2005)

**NESACS Service:** ACS SEED Coordinator for NESACS (1998-present); Member of the Theodore William Richards ACS Medal Award Committee (1999 – present); Chair of Theodore William Richards ACS Medal Award Committee (2000 – 2004); Councilor (2004-present); Chair-Elect (2005); Chair (2006)

**Memberships, Honors:** NSF CAREER Award (1996-2001); CASE Massachusetts Professor of the Year (2003); Northeastern University Excellence in Teaching Award (2004); Sigma Xi; AAAS; NSTA; CUR; Coblenz Society; SAS; AAUP; NEACT; SBIC

**Statement:** First, let me express my sincere thanks to all of you! I am extremely grateful for the opportunities I have had as one of your representatives on the Council over the past two years. I deeply value the opportunity this position has afforded me to "give something back" and the doors it has opened for me on so many levels. As one of your elected councilors, I have had the opportunity to serve on a national level with ACS SEED Com-

mittee and now with the Women Chemists Committee and its advocacy subcommittee. I feel that I am just getting started and I am eager to continue and deepen my involvement in National ACS and the WCC over the next several years. Of course I can only do this with your support so I am asking for your vote for the position of Councilor.

---

### **Julia H. Miwa**

**Education:** Massachusetts Institute of Technology, Cambridge, MA, 1987-1992; Ph.D. in Chemistry, June, 1992. Thesis title: Synthesis and Conformational Studies of the  $\beta$ -Amyloid Protein of Alzheimer's Disease; HAVERFORD COLLEGE, Haverford, PA, 1981-1985, B. A., May, 1985. Graduated magna cum laude with High Honors in Chemistry; Senior Research Project: Determination of exchange rate constants using two-dimensional NMR spectroscopy.

**Professional Experience:** Associate Professor (Sept. 2002 - present) Assistant Professor (Sept. 1994-August 2002): Department of Chemistry, Wellesley College; Research Area: Synthesis and Conformational Studies of Peptide Analogs with Backbone Modifications Teaching Areas: Organic Chemistry, Introductory Chemistry; Visiting Scientist: Whitehead Institute for Biomedical Research (June 1997-June 2001); Laboratory of Dr. Peter S. Kim. Synthesis and Evaluation of Thioxo Peptide Analogs of the GCN4 Leucine Zipper Helix; NIH Postdoctoral Fellow: University of California, Berkeley (July 1992 - June 1994); Laboratory of Professor Paul A. Bartlett. Design, synthesis, and evaluation of inhibitors of HIV-1 protease. Synthesis of a combinatorial library of phosphinate inhibitors of thermolysin.

**Honors and Awards:** Pinanski Prize for Excellence in Teaching, Wellesley College, June 1997; Camille and Henry Dreyfus Faculty Start-up Grant for Undergraduate Institutions National Institutes of Health Postdoctoral Fellowship, awarded June 1992.

**Memberships:** American Chemical Society: Division of Organic Chem-

istry, Division of Chemical Education; American Association for the Advancement of Science; Sigma Xi; Phi Beta Kappa; Project Kaleidoscope, Faculty for the 21st Century

**ACS/NESACS Service:** Councilor 1999 - 2002, 2004 - 2007; Membership Committee 2000-01

**Statement:** I have greatly enjoyed my service thus far as a Councilor representing NESACS. At local and national meetings, I and my fellow NESACS Councilors have had met with national officials and voted on matters of importance to both local sections and the national membership of ACS. If elected to another term, I hope to continue put this experience to work on behalf of the Northeastern Section.

My particular areas of interest are (a) chemical education and the issues facing academic chemists (job security issues, ACS curricula, and K-12 teacher training are a few of the hot issues in this area) and (b) the status of chemical professionals and of chemistry as a discipline (outreach activities and communication with legislators fall under this heading). If elected, I would seek to work with Council Committees that address these particular issues.

ACS serves a diverse group of chemical professionals. The membership includes male and female professionals of varying ages, races, educational levels, and professional interests. For the most part, ACS Council does not reflect this diversity. The NESACS delegation reflects the diversity of the ACS membership better than most, and this is a direct result of the efforts of our leaders to encourage participation from all members of NESACS. There are many qualified candidates on this year's ballot, and all will represent NESACS well. I hope the voters will do as they have done in the past and select a varied slate of Councilors to represent NESACS. I would be pleased to serve again as Councilor of the NESACS and to share my experience with any new Councilors elected this time.

---

### **Dorothy J. Phillips**

**Education:** Vanderbilt University, B.A., 1967; University of Cincinnati, Ph.D., 1974.

**Professional Experience:** (past 10 years): Waters Corporation, 1984 to date; Director, Clinical Marketing, 2004; Director, New Business Development, 2003-04, Director, Strategic Program Management, 2000-02; Brand Manager, 1997-99; R&D Laboratory Manager, 1986-96.

**Service in ACS National Offices:** Committee on Committees, 2001-06, Secretary 2003-04, Chair of Industrial Pipeline Sub-Committee 2005-06; Committee on Membership Affairs, 1997-00, Committee Associate, 1996; Committee on International Activities, Committee Associate, 1998.

**Service in NESACS Offices:** Member ACS since 1973. Northeastern Section: Councilor, 1995-2006; Chair, 1993; Chair-Elect and Program Chair, 1992; Project SEED, Committee Chair, 1994-95; Nominating Committee, Chair, 1994; Co-chair Centennial Celebration, 1998; Chair, Fundraising Committee, 2004-06.

**Memberships:** The American Society of Mass Spectrometry (ASMS); American Association of Pharmaceutical Scientists (AAPS); National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCCHE); American Association of Clinical Chemists (AACC); ACS Divisions: Agrochemicals; Analytical Chemistry; and Biological Chemistry.

**Honors:** Sigma Xi; Distinguished Alumni, University of Cincinnati, awarded by both McMickens College of Arts and Sciences and Department of Women Studies; Waters' Manager Award for Innovation, 1987 and 1988; Honored by TTT Mentor Program of Cambridge, MA as a Minority Role Model, 2004-05, "Minority Role Models in Science, Mathematics, Technology and Engineering - A Traveling Photo Exhibit".

**Related Activities:** Dow Chemical Company, 1974-84; Delegate with the People to People Ambassador Program to China in 1990 with a group of scien-

tists for technology transfer; Member of AAPS Delegation to China in 2004 to explore academic and industrial collaborations in the pharmaceutical sciences; Established Waters' sponsorship of the Distinguished Service Award in Analytical Chemistry given by the Division of Analytical Chemistry; Partners in Mathematics and Science Committee of Alpha Kappa Alpha Sorority Incorporated, coordinating the Northeastern Section's sponsorship of programs that focus on increasing the math and science interest of minority students in greater Boston; Mentor for the New England Board of Higher Education (NEBHE) Science Network for students who are traditionally underrepresented in Science, Technology, Engineering and Mathematics (STEM); papers presented at PittCon, International Symposium on Column Liquid Chromatography (HPLC Symposiums) and at the national meetings of ACS, AAPS and ASMS. Approximately 70 publications and presentations in the field of analytical chemistry with a focus on HPLC.

**Statement:** The 2006 President of the American Chemical Society, Dr. Ann Nalley, stated "Service as an ACS councilor is a significant responsibility". I have accepted that responsibility as a Councilor of the Northeastern Section of the American Chemical Society (NESACS). I wish to continue to serve as a Councilor of NESACS; as a member from industry I help NESACS's initiatives to be inclusive, addressing both industrial and academic scientists and scientific matters. I also want to continue in order to help the Society develop and implement its strategic plan for 2007-2009.

The past three-years as Councilor has been enlightening and rewarding, giving me an opportunity to make contributions to NESACS as well as to the Society at the national level. Important to a non-profit organization is fund-raising. After becoming chair of NESACS's Corporate Fundraising committee, the biannual vendor fair was initiated successfully in 2004; the second fair is being planned for 2006. As a NESACS Councilor I was elected to the ACS Council Committee on

Committees; in this position my focus has been on increasing the involvement of industrial chemists in the governance of the Society. The Sub-Committee that I chair worked with ACS staff to design a website with testimonies of industry chemists involved in Society governance as an incentive to their colleagues to also serve.

If given the opportunity to continue as a Councilor, I will use my unique set of skills developed through leadership roles in industry and in the Society to strengthen the programs and operation of NESACS. I will focus on supporting the inclusiveness of programs in the Section in my next three-year term. My work with the Society will support its 2006 vision field and developing strategic plan to help both academic and industrial chemists advance their careers and become leaders of the chemical enterprise.

I ask you to support my serving as Councilor of NESACS. I will accept my responsibility as a Councilor to bring to reality a stronger Section and a better and more effective American Chemical Society.

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### **Marietta Schwartz**

(For biographical information see above under Chair-Elect)

**Statement:** The role of the councilors is an important one to the section, as they represent the section to the larger society and communicate national decisions back to the local section. Policy and communication are two areas that I deal with on a daily basis in my current administrative position, and I would be honored to have the opportunity to utilize those skills to serve NESACS.

---

### **Amy E. Tapper**

**Education:** B.S. Chemistry, Boston College; Ph.D. Chemistry, Boston University

**Professional Experience:** Aquatec, Inc., Colchester, VT (1994-95); Wyeth-Ayerst Pharmaceuticals, Rouses Point, NY (1995); Senior Scientist, Genzyme Drug Discovery and Development, Waltham, MA (2001-2004), Associate Director, Peptimmune (2004-present)

**ACS Service:** Member 1995 - present, International Activities Committee, Associate (2004-2006), Councilor

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(2003–06), Boston National ACS Meeting Committee, 2002, Recipient of a 2002 ACS YCC Leadership Development Award

**NESACS Service:** Chair-elect 2004, Chair 2005, Immediate Past Chair 2006; Chair NESACS Golf Tournament 2005, 2006; Younger Chemists Committee (NESACSYCC)—Founding member, Co-chair (1999), Chair (2000-02), Co-chair (2003); Chair Career Development Committee, Chair, Social Committee, Co-chair (1999-2003); Coordinator of 2001-2003 YCC Career Workshops. Northeast Student Chemistry Research Conference (NSCRC) Committee—Founding member, Co-chair and Speakers Officer (1999-2000); Chair 2001; Co-chair 2002. Member of the steering committee for the exchange initiative between NESACS and the GDCh (2000–2006); YCC position on the NESACS board (2000-03); Nominating Committee (2001) Director-at-Large (2002); Corporate Affiliates Committee (2003). YCC ChemLuminary award received in 2000, 2001, 2002, 2003, 2004.

**Other Related Professional Experience/Service:** Boston University Younger Chemists Committee—Founder and President (1999-2000); Chair, Career Development Committee (1999-2001); Co-chair, Social Committee (1999-2001); Member of the Graduate Student Organization of Boston University (1998-99); Student member of the Boston University Chemistry Graduate Affairs Committee (2000-01).

**Statement:** One of the roles of a Councilor is to represent the Section at National meetings. Over the past three years during my chair term, I believe that I have gained a much greater understanding of the strengths and needs of our Section. I continue to feel strongly that for the future of our local section, it is imperative that we have younger chemists active on committees and the NESACS board. Younger chemists can learn from the experience of our members and bring new ideas to the section. We need to increase the

participation of younger chemists both from academia and industry as well as increase our industrial participation as a whole. As a Councilor, one is encouraged to interact with the members of our local section as well as members of our National Society. This enables the exchange of ideas for networking and programming for the betterment of our Section. I believe that my experience with the Section makes me an appropriate candidate for Councilor.

---

### *Alfred Viola*

**Education:** BA, MA, Johns Hopkins University; Ph.D., University of Maryland.

**Professional Experience:** Boston University, Research Associate, 1955-57; Northeastern University, 1957-62 Asst. Prof., 1963-68 Assoc. Prof., Professor 1968-97, Prof. Emeritus 1997-present; Visiting Professor University of Munich, Germany, 1977, and Monash University, Melbourne, Australia, 1984; Visiting Scholar, Wellesley College, 1992-present.

**Service to ACS and NESACS:** Alternate Councilor 1963-68, Councilor 1986-88, Alternate Councilor 1990-97, Councilor 1998-2000, Alternate Councilor 2001-present; Norris Award Selection Committee 1979-86 (Chair 1981 and 1985); Continuing Education Committee 1989-present, (Co-Chair 1989, Chair 1990-present); Nominating Committee 1998.

**Statement:** I was honored to receive the Henry A. Hill Award in 1996 for Distinguished Service to the Northeastern Section, but that does not entitle me to rest on my laurels. As Chair of the Continuing Education Committee I have been responsible for bringing National ACS Short Courses to the Section at a fraction of the tuition costs normally associated with these programs. Many of the cutting edge topics covered in such courses were not in any curriculum for Chemists graduating as recently as five years ago. I firmly believe this to be a vital activity which the Section must undertake to provide our membership the opportunity to stay abreast of the ever evol-

ing advances and changes in the world of Chemistry.

In a different vein, I firmly believe that the problems facing the chemical profession, and its practitioners, are more numerous and profound than at any previous time in the history of the science. But so too are the opportunities for Chemistry to contribute to the health and welfare of society as a whole. We must do more to educate our political leadership whose scientifically uninformed decisions often hinder scientific progress in this nation. We also must address the rampant scientific illiteracy within the public at large. There is need for far greater understanding of the truths and misconceptions which abound about the world of Chemistry. The world of advertising is rampant with misstatements regarding chemicals, or lack thereof, in individual products. Chemistry has long been a positive force in the welfare of society but the general public now perceives it otherwise. I would like to see the A.C.S. address this issue much more forcefully.

I would appreciate your vote to provide me the opportunity to continue my activities on behalf of this Section and to represent these views within the Northeastern Section and the National Council.

---

### *Denyce K. Wicht*

**Education:** B.A. (chemistry) with honors, University of Vermont (1994); Ph.D. (chemistry), Dartmouth College (1999).

**Professional Experience:** Assistant Professor of Chemistry, Suffolk University (2005-present); Visiting Assistant Professor of Chemistry, Wellesley College (2003-2005); Staff Chemist, General Electric Global Research Center (2000-2002); Postdoctoral Associate, Massachusetts Institute of Technology (1999-2000).

**ACS Service:** Member since 1991.

**Statement:** I am running for the position of Councilor/Alternate Councilor in order to progress my ACS affiliation to a more active role; one that incorporates both leadership and service. My aim is to begin my service

with the Northeastern Section of our professional society and I look forward to facilitating communication between our local chemistry community and national officers of the ACS.

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## DIRECTOR-AT-LARGE

### *Cassandra Celatka*

**Education:** B.A., Chemistry, North Adams State College, 1994; Ph.D., Chemistry, Boston University, 2004.

**Professional Experience:** Scientist, Staff I, Genzyme Corp., Waltham, MA (2005-present); Sr. Scientist, DAIAMED (formerly Suntory Pharmaceutical Research Laboratories), Cambridge, MA (2002-2005).

**ACS Service:** Member (1995-present)

**NESACS Service:** Northeastern Section Younger Chemists Committee, NSYCC (1999-2003); Organizing Committee Northeast Student Chemistry Research Conference (NSCRC) (1999-2003); YCC Mentor for Northeast Section Chemistry Career Fair (2004); Member of the steering committee for the exchange initiative between NESACS and the GDCh (2004).

**Statement:** Many younger chemists do not realize how their involvement with a professional organization can benefit their career development. This involvement is not just important for younger chemists in the early stages of their careers but is equally important for chemists who have been involved with the organization for years. I see an important role of the Director-at-Large to cultivate these relationships to benefit the future of NESACS.

---

### *Ivan V. Korendovych*

**Education:** B.S. (1999), M.S. (2000) Taras Shevchenko National University of Kiev, Ph.D. (2006 expected) Tufts University

**Professional Experience:** Teaching and Research Fellow at Taras Shevchenko National University of Kiev (1995-2000) and Tufts University (2001-2006)

**ACS Service:** Member since 2001

**NESACS Service:** Younger Chemists Committee Chair (2005-present), Assistant-Chair (2003-2005)

**Membership, Selected Honors:** Tufts University Graduate Student Research Award (2005), Tufts University Outstanding Academic Performance Award (2004), 35th International Conference on Coordination Chemistry Poster Award (2002), Award at 42nd Conference of Polish Chemical Society (1999), National Academy of Sciences of Ukraine F. D. Ovcharenko fellowship (1999).

**Statement:** I'm honored to be nominated for a position of director-at-large for the Northeastern Section of the American Chemical Society. I have been involved in the local section activities for several years first as an Assistant Chair and then as a Chair of the Younger Chemists Committee (YCC). Our goal is involve younger chemists in national and local ACS program in order to help with their transition into a professional career. During past several years YCC reached new level of organization. New activities, such as highly successful Career Fair were introduced and organization of our traditional events was improved. Please visit our website [www.nsycc.org](http://www.nsycc.org) for detailed reports. Hard work and devotion of all YCC officers was reflected in last year's national ChemLuminary award. If elected I would try to get more students involved in participating in the local section activities. I will continue working within the local section to create opportunities for professional development of younger chemists.

---

### *W. Harry Mandeville*

**Education:** B.S., Colorado School of Mines, 1971; Ph.D., Massachusetts Institute of Technology, 1975.

**Professional Experience:** Hoffmann-LaRoche, Nutley, NJ 1975-1985. Process chemist in the Chemical Development department, Manager Kilo Lab; Hyperion Catalysis International 1985-1987. Chemical Process Development; Waters Chromatography, Division of Millipore Corp. 1987-

1991. Director, Chemical Products Research, Development and Engineering; GelTex Pharmaceuticals 1991-2000. Co-Founder and Vice President of Chemical Research, co-inventor of Renagel® and WelChol®; Genzyme Corp 2000-2004. Sr. Vice President, Chemical Research; Peptimmune, Inc. 2004-present. Vice President Process Chemistry and CMC.

**Awards and Achievements:** American Chemical Society Award for Team Innovation 2005; Colorado School of Mines Distinguished Achievement Medal, 2004; Colorado School of Mines Chemistry Department Visiting Committee, 2003-2006; Colorado School of Mines Distinguished Alumni Lecturer, 2002; American Chemical Society, Northeast Region, Industrial Innovation Award, 2001; National Kidney Foundation of Northern California, Champion of Hope Award, 2001; American Chemical Society, Polymer Chemistry Division, Award for Industrial Polymer Chemistry, 2000; R&D 100 Award for Renagel Capsules. Awarded by R&D magazine, 1999; 88 publications and patents

**Statement:** I have been a member of the ACS for 35 years and although I have received much from the Society, I have yet to give anything back. This position is perhaps only a very small gesture in that direction, but is one that is important to me. I will be helping organize and run the 2nd Annual NESACS Golf Tournament (the first was a major success with almost \$10,000 raised). My other priorities will include increasing industrial participation in the section's events through networking with my many industrial contacts.

---

### *Gary R. Weisman*

**Education:** Primary and secondary education in public schools in Mason, Ohio; B.S. in Chemistry With Distinction, University of Kentucky, 1971 (undergraduate research with Robert D. Guthrie); Ph.D. Organic Chemistry, University of Wisconsin-Madison, 1976 (mentor: Stephen F. Nelsen).

**Professional Experience:** Post-doctoral, University of California, Los

Angeles, 1976-77 (mentor: Donald J. Cram); Faculty member of the Department of Chemistry, University of New Hampshire since 1977, Professor of Chemistry since 1994; Visiting Associate Professor, University of Wisconsin, 1986; Visiting Fellow, University of Bristol, England, 1987 and 1998; Visiting Professor, Australian National University, 2005; Visiting Professor, University of Melbourne, Australia, 2005.

**Research Interests and Areas of Expertise:** Physical organic chemistry; Synthetic organic chemistry; Synthesis, reactions, special properties and coordination chemistry of amines and polyamines and derivatives; Ligand design and synthesis; Biomedical applications of coordination complexes; Supramolecular chemistry; Conformational analysis and molecular modeling; Intramolecular interactions including transannular interactions; Transacylation reactions; *In/out* isomerism and homeomorphic isomerization of bicyclic molecules; Use of NMR in structural and conformational analysis of organic and metallo-organic compounds.

**ACS Service:** Member since 1970. Co-Program Chair of NERM 2001, the 30<sup>th</sup> Northeast Regional Meeting of the American Chemical Society, Durham, NH; Director-at-Large, NESACS, 2002-present.

**NESACS Service:** Richards Medal Committee 2004-present.

**Memberships, Honors, Etc.:** Sigma Xi - The Scientific Research Society of North America, 1976-present; Excellence in Teaching Award, College of Engineering and Physical Sciences, University of New Hampshire, 1995; Wilshire Fellow, University of Melbourne, Australia, June-Aug, 2002; Elected Vice-Chair (2003) and Chair (2005), Gordon Research Conference on Physical Organic Chemistry; Gloria G. and Robert E. Lyle Professorship, Department of Chemistry, University of New Hampshire, 2005-2009; Reviews Editor, *Journal of Physical Organic Chemistry*, 2006-present.

**Statement:** I would be pleased to

continue to serve as a Director-at-Large of the NESACS if the members choose that I do so. Naturally, I would do my best to further the goals of the Society and represent the views of the members of the section, with special emphasis on the views of New Hampshire members. Two continuing goals of my service are to increase the involvement of New Hampshire chemists in section activities, and to promote participation in Northeast Regional Meetings of the ACS. I believe that NERM's are scientifically rewarding and wonderful opportunities for involving chemists in Society activities early in their careers.

---

## NOMINATING COMMITTEE

### *Mark Froimowitz*

**Education:** B.S. Chemistry, Brooklyn College, 1968; Ph.D. Physical Chemistry, New York University, 1972.

**Professional Experience:** postdoctoral fellowship, Brandeis University, 1972-73; postdoctoral fellowship, New England Medical Center Hospitals, 1973-74; applications analyst, Massachusetts Institute of Technology, Cambridge, 1974-76; Instructor, University of Lowell, 1976-77; Assistant Biochemist, McLean Hospital, 1977-86; Research Associate in Psychiatry (Psychobiology), Harvard Medical School, 1977-79; Instructor, Department of Psychiatry (Psychobiology), Harvard Medical School, 1979-87; Lecturer, Department of Chemistry, Tufts University, 1986; Associate Biochemist, McLean Hospital, Belmont, MA, 1987-93; Assistant Professor, Department of Psychiatry (Molecular Pharmacology), Harvard Medical School, 1988-93; Senior Scientist, Molecular Design, Pharm-Eco Laboratories, 1994-98; Scientific Fellow, Pharm-Eco Laboratories, 1998-02; Research Professor of Chemistry, Massachusetts College of Pharmacy and Health Sciences, 2002-.

**Memberships and Honors:** American Association for the Advancement

of Science, 1972-; American Chemical Society, 1978-; Quantum Chemistry Program Exchange, 1978-; Medicinal Chemistry Group of the Northeastern Section of the American Chemical Society, 1978-; International QSAR Society, 1993-; Society for Neuroscience, 1994-; Boston Area Neuroscience, 1998-; Research Interests: Molecular modeling using molecular mechanical and quantum mechanical methods; conformational analysis using experimental and theoretical methods; and the design and synthesis of pharmacological compounds with dopamine and opioid activities. About 60 publications and 6 issued patents

**ACS Service:** Secretary-Treasurer, Medicinal Chemistry Group of the NESACS, 1981-82; Program Chairman, Medicinal Chemistry Group of the NESACS, 1990; Chairman, Medicinal Chemistry Group of the NESACS, 1991.

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### *Thomas R. Gilbert*

**Education:** Clarkson College of Technology, B.S., 1968; Massachusetts Institute of Technology, Ph.D., 1971

**Professional Experience:** Current Positions Associate Professor of Chemistry and Education, Acting Dean, School of Education, Northeastern University

**Service in ACS (National):** Committee on Nominations and Elections, 2001-06, Vice-Chair, 2004-06, Chair of Task Force on Election Procedures, 2003-2005; Council Policy Committee (Nonvoting), 2000; Committee on Meetings and Expositions, 1995-00, Chair, 2000, Committee Associate, 1994, Education Division, Examinations Institute, 2000 Analytical Chemistry Examination Committee, 1998-00; (Divisional): 46th Annual Summer Symposium on Analytical Chemistry, Co-Chair Organizing Committee, 1993.

**Service in NESACS (Northeastern Section):** Councilor, 1990-07; Alternate Councilor, 1987-89; Chair, 1988; Chair-Elect, 1987; Nominations



Committee Chair, 1989; Long-Range Planning Committee, 1989; Analytical Group Chair, 1983-86; Northeast Regional Meeting: General Chair, 1993; Centennial Celebration Program Chair, 1998

**Honors:** Outstanding Teacher of First Year Students Award, College of Engineering, Northeastern University, 2002; Excellence in Teaching Award, Northeastern University, 1999; Sigma Xi; Gamma Sigma Epsilon.

**Statement:** Having served once as chair of the Nominations Committee, I look forward to serving again as a member.

---

### **Patrick M. Gordon**

**Education:** B.Sc. University of Guyana (1977); M.Sc. University of New South Wales, Australia (1982); Ph.D., University of Manitoba, Canada (1987)

**Professional Experience:** Post Doctoral Associate, Kansas State University, (1987-1988); Organix Inc., Woburn, MA (1988-1991); Senior Scientist; Polaroid Corporation (1991-2001); Arqule Inc. (2001-2002); Polymer Laboratories, (2003-2004); Simmons College (2005 to Present).

**ACS Service:** Alternate Councilor (1994-1996, 1997-1999, 2000-2001, 2003-2006)

**NESACS Service:** NERM Chair of the Symposium on Cannabinoids, (1989); Centennial Committee Co-Chair (1998); Member, Board of Publications 1999 to present; Secretary, Board of Publications, 2000; Chair, Board of Publications, 2002; Member, Board of Publications, 2003.

**Statement:** It would be a pleasure to serve on the Nominating Committee of the NESACS.

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### **Arthur Greenberg**

**Education:** Ph.D., Princeton University, 1971

**Professional Experience:** An organic chemist, he is Professor of Chemistry at the University of New Hampshire. He was Dean of Engineering and Physical Sciences at the University of New Hampshire (2000-2005) and prior to that Chair, Depart-

ment of Chemistry, University of North Carolina at Charlotte (1994-2000). Prior to that he was a faculty member at New Jersey Institute of Technology and Rutgers University and was a Councilor for the North Jersey Section of ACS as well as Chair of the Organic Chemistry Division of the North Jersey Section of ACS.

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## **NORRIS AWARD COMMITTEE**

### **Morton Z. Hoffman**

**Education:** A.B., Hunter College-City University of New York (1955); M.S., University of Michigan (1957); Ph.D., University of Michigan (1960).

**Professional Experience:** Postdoctoral Research Associate, Sheffield University, England (1960-61); Boston University: Assistant Professor through Professor (1961-2005), Emeritus (2005-present); Visiting Scientist, U.S. Army Natick Laboratories (1969-74); Director, Center for Teaching Excellence, College of Arts and Sciences, Boston University (1994-97); U.S. National Representative, Committee on Chemistry Education, International Union of Pure and Applied Chemistry (2004-06).

**Recent ACS Service:** SOCED Task Force on Undergraduate Programming (1991-2002); CHED Program Committee (1992-2004), Chair (1999-2001); CHED International Activities Committee (1993-present); College Chemistry Consultants Service (1995-present), Advisory Board (2002-04); Editorial Advisory Board, General Chemistry Project (1999-2004); Chair, CHED Regional Meetings Committee (2000-present); Society Committee on Education (2002-present); Organizing Committee, Conference on Research and Education in the Middle East (2002-present); Chair-Elect, Chair, Immediate Past Chair, Division of Chemical Education (2004-06).

**Recent NESACS Service:** Member, Board of Directors (1993-present);

Chair, Education Committee (1993-96); Chair, College Subcommittee, Education Committee (1997-present); Member, Centennial Committee (1997-99); Alternate Councilor (1994-97, 1999-2002); Councilor (1997-98, 2003-present); Chair, National Meeting Committee (2001-02); Chair-Elect, Chair, Immediate Past Chair (2001-03)

**Relevant Memberships:** American Chemical Society; American Association for the Advancement of Science; New England Association of Chemistry Teachers; Sigma Xi

**Honors:** Phi Beta Kappa (1955); Senior Postdoctoral Research Associate, U.S. National Academy of Sciences (1969-70); Associate of the Danforth Foundation (1970); Alumni Association Hall of Fame, Hunter College-City University of New York (1977); Fellow of the American Association for the Advancement of Science (1992); Metcalf Cup and Prize for Excellence in Teaching, Boston University (1994); Henry A. Hill Award for Outstanding Service, Northeastern Section (1999); National Responsible Care® Catalyst Award for Teaching Excellence at Four-Year Colleges and Universities, American Chemistry Council (2002); The John A. Timm Award for the Furtherance of the Study of Chemistry, New England Association of Chemistry Teachers (2003); Arthur Sweeny, Jr., Memorial Lecturer, Lehman College-City University of New York (2003); Leavey Family Lecturer, St. Michael's College, Vermont (2005); James Flack Norris Award for Outstanding Teaching, Northeastern Section (2005); Alumni Association Outstanding Professional Achievement Award, Hunter College-City University of New York (2006).

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### **Mary Jane Shultz**

**Education:** B.S. with Honors, 1970, University of Wisconsin; 1970-71, Kansas State University; Ph.D., 1975, Massachusetts Institute of Technology

**Professional Experience:** Chair, Department of Chemistry, Tufts University, 2000-to date; Professor, Tufts

## Candidates

Continued from page 25

University, 1999-to date; Research Scientist, Laser Spectroscopy Laboratory, M.I.T., 1985-89; Associate Professor, Tufts University, 1985-1999; Visiting Professor, M.I.T., 1985-87; Assistant Professor, Tufts University, 1979-85; Research Fellow, Brandeis University, 1979-80; Assistant Professor, University of Mass. Boston, 1978-79; Research Associate / Lecturer, Boston College, 1977-78; Research Fellow, Harvard University, 1976-77; Post Doctoral Research Associate, University of California, Berkeley, 1975-76

**Honors and Awards:** Chair, Visualization in Science and Education International Conference, 2003; Outstanding Faculty Award, Tufts University (Chemistry) 1999; National Science Foundation Visiting Faculty, M.I.T., 1984-85; National Science Foundation Visiting Professorship, 1985-86; Mellon Grant Faculty Development Award Recipient, 1983; Tufts University Faculty Research Fellow, Summer, 1980; Brandeis University Research Fellow, Summer, 1979; Research Fellow, Division of Engineering and Applied Physics, 1976-77; Radcliffe Fellow, 1976-77;

**Other Accomplishments:** Author of text, Chemistry for Engineers: An Applied Approach (Houghton Mifflin, Co., published 2006);

**Appointments and Panels:** Board of Directors, Dudley Wright Center for Science Education, Tufts University 1993-present; Chair, Workshop Essential Visualization Tools, 2005 Chair, Workshop on Visualization Tools, 2003; Vibrational Spectroscopy Session Chair, FACSS 2002; Session Chair, Dynamics at Surfaces, 2003; Symposium CoOrganizer, Symposium on Vibrational Spectroscopy at Surfaces, 2006 National ACS Meeting

**Memberships:** American Chemical Society, American Physical Society, Sigma Xi, Iota Sigma Pi

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### Dean Wilcox

**Education:** BS (1978), MS (1979), Chemistry, University of California at

Riverside; PhD (1984), Chemistry, Massachusetts Institute of Technology.

**Professional Experience:** Assistant Professor (1984-1990), Associate Professor (1990-1996), Professor (1996-present), Chair (2001-2004) of Chemistry at Dartmouth College; recent invited lectures: "Frontiers in Bioinorganic Chemistry" symposium at the 82nd Canadian Society of Chemists Conference and Exhibition (5/99), "Metal-Peptide Complexes" symposium at the 221st National ACS Meeting (4/01), 9th International Meeting on EPR Studies of Viable Systems (9/01), Metals in Biology Workshop at University of Southern Denmark (9/01), 2003 Current Trends in Microcalorimetry (7/03).

**Professional Service:** member of ACS since 1978; member of NESACS Nominating Committee 2000, 2001, 2004; member of Sigma Xi since 1984, current President of the Dartmouth Chapter; member of Society of Biological Inorganic Chemistry; member of International EPR(ESR) Society; Board of Editors of *Inorganic Chemistry* (1995, 1996); advisory committee for EPR Center for the Study of Viable Biological Systems, Dartmouth Medical School (1997-present); organizer of "Coordination Chemistry of Metal Metabolism" symposium at the 224th National ACS meeting (8/02); organizer of "Dartmouth Chemistry Symposium" (10/03).

---

### Todd Wimpfheimer

**Education:** B.A. 1987, Colgate University; Ph.D. 1993, UCLA

**Professional Experience:** Salem State College (1994-present), currently Associate Professor and Chair, Department of Chemistry and Physics.

**ACS Service:** Member, (1991-present)

**NESACS Service:** Member; I have attended and presented at meetings, and look forward to serving on this committee. ◇

What exactly goes on at NESACS' monthly Board meetings?

[www.nesacs.org/reports](http://www.nesacs.org/reports)

## NEW BASEBALL

### Minor League Doubleheader at Fenway Park

A new baseball experiment is set for Saturday, August 26, 2006 that takes place at Fenway Park starting at 2:00 p.m. involving a double-header with the Lowell Spinners vs. the Oneonta Tigers followed by the Pawtucket Red Sox vs. the Rochester Redwings. Prices have not been set but should be about half the Red Sox prices. Tickets go on sale immediately and we shall order a bunch of tickets for NESACS members. Call or e-mail Wally Gleekman if you would like tickets.

To reserve tickets for the games below, contact Wally Gleekman at >gleekmanw(at)msn.com< of. 617-527-1192. An 8 page info outline of teams, directions, parking, etc. is available on request. ◇

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## Summerthing 2006

Continued from page 7

(Fitton Field – Exit 11 off I290)

### New Hampshire Fisher Cats – AA

vs. Altoona Curve  
Sunday, June 11, 1:05 pm  
(Fisher Cats Ballpark – Exit 8 off I93)

### North Shore Spirit – A

vs. Quebec Les Capitales  
Sunday, July 2, 2:05 pm  
(Fraser Field – on Rt. 107 Lynn)

### Nashua Pride – A

vs. Sussex Seahawks  
Saturday, July 15, 7:05 pm  
(Holman Stadium - Exit 7E off Rt. 3)

### Brockton Rox – A

vs. New Haven Cutters  
Sunday, August 6, 5:05 pm  
(Campanelli Stadium - Exit 17A off Rt. 24)

### Lowell Spinners – A

vs. Tri-City Valley Cats  
Sunday, August 20, 5:05 pm  
(LeLacheur Park - Lowell Connector off Rt. 3) ◇

# Summary of Governance Actions

231st ACS National Meeting  
Atlanta, GA - March 26-30, 2006

By Morton Z. Hoffman

## ACTIONS OF THE COUNCIL

### Election Results

The Committee on Nominations and Elections presented to the Council the following nominees for selection as candidates for President-Elect, 2007: Bruce E. Bursten, Richard Eisenberg, Bassam Z. Shakhshiri, and Matthew V. Tirrell. By written ballot the Council selected Bruce E. Bursten and Bassam Z. Shakhshiri as candidates for 2007 President-Elect. These two candidates will stand for election in the Fall National Election.

The Committee on Nominations and Elections announced the results of the election to select candidates from the list of nominees to represent District I and District V on the Board of Directors for the term 2007-2009. Nominees for District I included: D. Richard Cobb, Thomas R. Gilbert, Peter C. Jurs, and Anne T. O'Brien. Nominees for District V included John E. Adams, Judith L. Benham, Richard S. Givens, and Josef Michl. By mail ballot the Council selected Thomas R. Gilbert and Anne T. O'Brien as District I candidates; and as District V candidates, John E. Adams and Judith L. Benham. Ballots will be mailed on or before October 10 to all members in District I and District V for election of a Director for each District.

### Candidates for Directors-at-Large

The Committee on Nominations and Elections announced the selection of the following candidates for Directors-at-Large for a 2007-2009 term: William H. (Jack) Breazeale, Jr., Dennis Chamot, Peter K. Dorhout, Paul R. Jones, Valerie J. Kuck, and Dorothy J. Phillips. The election of three Directors-at-Large will be conducted in the fall. Two candidates will fill the 2007-2009 term, and one will fill a two-year vacancy for 2007-2008 created by the resignation of Director-at-

Large James D. Burke (effective December 31, 2006). Ballots will be mailed to the Council on or before October 10.

### Committee Review

As part of a regular review, the Council VOTED to continue the Committee on Admissions and the Committee on Professional Training. The Committee on Admissions has the power to interpret and apply the requirements for membership, including determining status of applicants educated in foreign countries. The Committee on Professional Training promotes and assists in the development of high standards of excellence in all aspects of post-secondary chemical education, and undertakes studies important to their maintenance.

### The Society's Finances

The Society ended 2005 with a net contribution from operations of \$11.6 million, which was \$9.1 million favorable to the approved budget. The favorable variance was primarily attributable to higher-than-budgeted print and electronic information services revenue and investment income, as well as expense savings from staff vacancies and reductions in information technology spending. The Society also realized \$21.0 million in investment gains. In total, unrestricted net assets increased just over \$26 million in 2005 to \$211 million, and the Society ended 2005 in full compliance with the Board-established financial guidelines.

### Registration Report

As of March 28, 2006, the ACS spring national meeting had attracted 12,546 registrants as follows: Regular attendees 6,323; Students 4,158; Exhibitors 1,288; Exposition only 413; and Guests 364.

## Society Initiatives

Many ACS committees and councilor caucuses discussed and/or provided input into three key Society initiatives:

The Society's new vision statement: *"Improving people's lives through the transforming power of chemistry,"* which resulted from the input of several thousand ACS members, was unveiled and discussed at this meeting.

The Board-Council Policy Committee Governance Review Task Force was charged with reviewing the Society's governance, and Constitution and Bylaws, to ensure that the Society has a governing framework to enable it to best fulfill its mission, meet member needs, and remain a world-class organization. The task force developed a framework that emphasized five key elements of the Society's governance, which are: membership, geographical organization, disciplinary organization, governance structure, and governance operations.

A Program Review Advisory Group (PRAG) has been established to assist the Committee on Budget and Finance in reviewing all programs of the Society (with some exemptions) on a periodic and regular basis. The PRAG consists of councilors, members of the Board of Directors, members of the Committee on Budget and Finance, and representatives from the committees with oversight over the programs under review in a given year.

### Member Statistics

ACS closed 2005 with 158,422 members, reversing a 4-year downward trend in Society membership. Of the 15,532 applications processed in 2005, nearly 900 came from the Member-Get-A-Member campaign, in which many councilors participated. The membership retention number remained stable at 92.4%.

## Governance

Continued from page 27

### Special Discussion

A special discussion item was put on the Council agenda for this meeting. The discussion focused on membership – specifically, the requirements for ACS membership, and whether they should be made more or less restrictive, or kept the same. ACS President E. Ann Nalley invited the co-chairs of the Board-Council Policy Committee Governance Review Task Force, James D. Burke and William F. Carroll, to help frame the discussion by presenting the results of a councilor survey on ACS membership requirements.

### 2006 Member Dues

The Council VOTED to set the member dues for 2007 at the fully escalated rate of \$132.

### Future National Meetings

The Council VOTED to recommend to the Board of Directors that the spring meeting for 2015 be held in Denver, Colorado, March 22-26; and that the fall meeting be held in Boston, Massachusetts, August 16-20. The Council also voted to recommend locations and dates for the 2016 meeting as follows: the spring meeting to be held on March 13-17, in San Diego, California; and the fall meeting to be held in Philadelphia, Pennsylvania, on August 21-25.

## ACTIONS OF THE BOARD OF DIRECTORS

### The Special Temporary Assessment

In December 2002, the Board of Directors approved a special temporary assessment to cover the costs of increased funding for divisions and local sections. This funding increase resulted from the Petition for Division and Local Section Funding, which was subsequently approved by the ACS Council, Board, and membership in 2003. The Board enacted the temporary assessment with the understanding that it would be reviewed each year to determine whether it could be reduced. In light of the Society's strong financial performance, the Board VOTED that, rather than enacting the assessment of \$8 scheduled for 2007, that the assessment would be reduced to \$4. 2007 is the final year for the Special Assessment.

### The Board's Committees and Task Forces

The Board received a report of the screened list of candidates from the Committee on Grants and Awards for the 2007 Priestley Medal, the Volunteer Service Award, and the Parsons Award. The Board will announce the winners after its June meeting.

The Board voted to adopt an amendment to its Regulations that delegates authority to approve the Society's National Historic Chemical Landmark designations to the Board's

Committee on Public Affairs and Public Relations, upon recommendation of the ad hoc Committee on National Historic Chemical Landmarks.

The Board also received updates and reports from its Green Chemistry Institute Task Force, the Board-Council Policy Committee Governance Review Task Force, the Percy Julian Task Force, and the Contingency Planning Working Group. The Board voted to adopt several recommendations as presented by its Green Chemistry Institute Task Force.

### The Society's Staff

The Executive Director/CEO and several of her direct reports updated the Board on an upcoming workshop on evolving information/technologies and trends, key initiatives related to Washington information technology - including the Web Presence project - and the activities of Chemical Abstracts Service, the Publications Division, and the ACS General Counsel.

The Executive Director/CEO, joined by Dr. Robert Lichter of Merrimack Consultants, reported on the status of a review of the educational activities at the Society – including those of the ACS Education Division.

### Compensation of the Society's Executive Staff

On the recommendation of the Committee on Executive Compensation, the Board voted to approve several actions relative to compensation

## March 2006 Meeting



Nucleus Editor Dr. Michael Filosa with Speakers Bureau Head, Dr. Jin Ji



Professor Daniel Nocera introducing Richards Medal Winner Professor Richard R. Schrock



NESACS Chair, Pam Mabrouk presents the Richards Medal to Professor Richard R. Schrock

Pictures Courtesy of Ms. Ying Wei

# BUSINESS DIRECTORY

## SERVICES

## Governance

Continued from page 28

for the Society's Executive staff. The compensation of the Society's Executive Staff receives regular review from the Board.

### 2006 Board Goals

At the December 2005 meeting, the Board approved its own set of goals and metrics to help achieve successful implementation of the Society's strategic plan. At this meeting, the Board received an update on its progress toward achieving these goals.

### The Board's Activity in the Community

The Board considered an opportunity to participate in a community building activity in the San Francisco Bay Area while attending the fall 2006 ACS National Meeting in San Francisco. The activity, to be planned by local section organizers, focuses on the National Chemistry Week theme: "Your Home: It's all Built on Chemistry." The Board plans to readjust its schedule to allow for participation by its members. ◇

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For further information contact  
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 Fax-978-369-7306  
 Email [vwalworth@comcast.net](mailto:vwalworth@comcast.net)

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**Reporters needed to cover ACSNES monthly meeting lectures**

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## Calendar

Check the NESACS Homepage  
for late additions:  
<http://www.NESACS.org>

Note also the Chemistry Department web  
pages for travel directions and updates.

These include:

<http://chemserv.bc.edu/seminar.html>  
<http://www.bu.edu/chemistry/events/>  
<http://www.chem.brandeis.edu/colloquium.shtml>  
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<http://www.unh.edu/chemistry/seminars.html>

### May 1

Professor Matthew Francis (U.C. Berkeley)  
Title: TBA  
Woodward Lecture Series in the Chemical  
Sciences/Organic Chemistry Seminar  
Pfizer Lecture Hall, 12 Oxford St., Cambridge.  
4:15 p.m.

Prof. Ka Yee Lee (University of Chicago)  
Title: TBA  
Physical Seminar Series  
MIT, 56-114 4:30PM

### May 2

Prof. Heinz Roth, Rutgers University  
"History of Photochemistry"  
Univ. New Hampshire, Iddles Auditorium, L103,  
11AM

Prof. Robert Williams, Colorado State  
University  
"Total Synthesis as a Vehicle to Penetrate  
Biosynthesis and Biomechanism"  
Bristol-Myers Squibb Corporation Symposium,  
Boston College, Merkert 130, 4PM

Mark Howarth, MIT Chemistry Ting Lab  
Title: "Single-particle imaging in living cells  
with biotin ligase and re-engineered  
streptavidin"  
MIT, Rm 56-114 4:00PM

### May 4

Prof. Petyer Tonnie (Institut für Astrophysik  
Gottingen)  
Harvard / MIT Pchem Seminar Series  
Harvard Univ. Pfizer Lecture Hall, 5:00p

### May 8

Prof. Devarajan Thirumalai, University of  
Maryland  
Title: TBA  
Physical Seminar Series  
MIT, Rm 56-114, 4:30PM

### May 8-9

Professor Larry E. Overman (U.C. Irvine)  
(May 8) "New Strategies for Ring Construction:  
Exploratory Studies and Natural Total Product  
Synthesis."  
(May 9) "Total Synthesis of (-)-Sarain A"  
Max Tishler Prize Lectures  
Harvard Univ. Pfizer Lecture Hall, 4:15 p.m

### May 9

Prof. Suzanne Walker (Harvard Medical School,  
Chemistry and Chemical Biology)  
Title: TBA  
Biological Seminar Series  
MIT, 56-114, 4:00PM

### May 11

Carl Decicco, (Bristol Myers-Squibb) and David  
B. Collum (Cornell University)  
Title: TBA  
MIT, 6-120, 4:00PM

### May 15

Professor Atsushi Miyawaki (RIKEN Brain  
Sciences Institute, Japan)  
Title: TBA  
Woodward Lecture Series in the Chemical  
Sciences/Organic Chemistry Seminar  
Harvard Univ. Pfizer Lecture Hall 4:15 p.m

Robert Tyco, NIH  
Title: TBA  
Physical Seminar Series  
MIT, 56-114, 4:30p

### May 16

Prof. David MacMillan, California Institute of  
Technology  
"New Catalysis Concepts Sponsored by  
Schering-Plough"  
Boston College, Merkert 130, 4PM

### May 18

Robert M. Williams, Colorado State University,  
and Mohammad Movassaghi, MIT  
Title: TBA  
Organic Seminar Series  
MIT, 6-120, 4:00PM

### May 16

Prof. David MacMillan, California Institute of  
Technology  
"New Catalysis Concepts Sponsored by  
Schering-Plough"  
Boston College, Merkert 130, 4PM

### May 25

Symposium on the Synthesis of Organic  
Structures with Exceptional Properties  
Rik Tykwinsky (University of Alberta) 9:30am  
"A Carbenoid Approach to Polyynes with  
Unique Properties"

Jack B. Howard (Nano-C, Inc. Professor  
Emeritus MIT) 10:45am  
"Synthesis of Fullerenes and Nanotubes in  
Flames - From Laboratory Research to  
Industrial Production"

Jeffrey S. Moore (University of Illinois at  
Urbana-Champaign) 2:00pm  
"Foldamer Heterosequences: Modular and  
Customizable Molecular Containers"

Lawrence T. Scott (Boston College) 3:15pm  
"Strategies for the Rational Chemical Synthesis  
of Carbon Nanotubes"  
Boston College, Merkert 127.

**Notices for the Nucleus  
Calendar FOR MARCH 2006  
AND THE FOLLOWING MONTHS  
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