



# THE NUCLEUS

November 2018

Vol. XCVII, No.3

## Monthly Meeting

*2018 Norris Award to Gerard Parkin at Simmons University*

## Raj Rajur Receives 2018 Henry A. Hill Award

## September Meeting Report

*By Mindy Levine*

## Photos from the GDCh-NSYCC Exchange

*By Brian D'Amico*



# Dr. Arthur Obermayer and the Beginning of the Billion Dollar Small Business Innovative Research Program

By Jack Driscoll, Chair, Public Relations & Professional Development, NESACS

In 1961, Arthur Obermayer started Molecuon Research, a contract research company. From 1961 to 1965, he worked with Henry Hill before Henry moved his company, Riverside Research, to Haverhill. Arthur was an avid promoter of small businesses.

He was very active in NESACS starting in the late 1950's. He was a NESACS councilor, a trustee, and Chair in 1982. In 1996 through Obermayer's leadership, NESACS was among the first local sections to set up its own website.

I met Dr. Arthur Obermayer for the first time in Oct. 2012 when I (along with Jennifer Maclachlan and Mukund Chorghade) organized a Small Chemical Business Symposium at Nova Biomedical Corp. This symposium was scheduled to run from 12 to 5 PM.

This was the NESACS monthly meeting, which began at 4:30 PM and the evening meeting, which involved the recognition of 50- and 60-year members as well as the presentation of the Henry Hill Award. Arthur was to receive recognition as a 60-year member of the ACS. He wanted to talk at the meeting but was told that there was no time in the evening program.

I was asked if I could find a place in our symposium for Arthur to speak. Madeleine Jacobs, ACS Executive Director and CEO, graciously agreed to give up her slot to Arthur to talk about the formation of the Small Business Innovative Research (SBIR) Program. It was a great addition to our program. Arthur's speech is printed in the Dec. 2012 edition of the Nucleus ([http://nesacs.org/pub\\_nucleus/2012/Dec2012.pdf](http://nesacs.org/pub_nucleus/2012/Dec2012.pdf)).

When I heard his speech, I was amazed that he had been involved in starting the SBIR program in 1982. I was also very surprised that he had been involved in the Bayh-Dole Patent Act a few years later that gave the patent



(l-r): Madeleine Jacobs (ACS), Arthur Obermayer (presenter at the symposium and 60-year member), Mukund Chorghade and Jack Driscoll (co-organizers of the symposium)

Photo credit: M. Hoffman

rights to the SBIR awardees instead of the government. This was an incredible result. Instead of the Intellectual Property rights residing in a government warehouse, the private company would have the right to patent and commercialize their successful project.

After the symposium, I asked the audience if anyone was aware of Arthur's accomplishments with regard to the SBIR. There were representatives from banks, venture capital, ACS SCHB, and small businesses at the meeting. No one in the audience knew about this. I was aware of a number of companies that had successful SBIR's and I called and asked them whether anyone knew about Arthur Obermayer and the SBIR. Again no one was aware of this! We did get Arthur's remarks published in the Dec. 2012 issue of the Nucleus. Obermayer received the Henry Hill Award in Oct. 2013. [http://nesacs.org/pub\\_nucleus/2013/Oct13.pdf](http://nesacs.org/pub_nucleus/2013/Oct13.pdf)

In July 2015 Arthur and Judith Obermayer were inducted into the SBA Hall of Fame at a White House Ceremony (<http://www.mvtimes.com/2015/06/24/white-house-honors-chilmark-couple/>)

Sadly, in 2016, Arthur passed away. We organized a symposium in honor of Dr. Obermayer and the SBIR Program

at the ACS National Meeting in Boston in 2018. It was part of the Small Chemical Business Div. Program <http://analyzersource.blogspot.com/2018/#!> which was held on Aug. 20, 2018.

We had seven speakers and were fortunate to have Dr. Tom Connelly, Executive Director and CEO of the ACS, open the program. These presentations had a considerable amount of information on the early history to present day of the SBIR/STTR programs.

During my research, I was amazed to find that the SBIR/STTR program, which had been started in 1982 with a \$25,000 NSF award to Obermayer's Molecuon was funded at 1.7% of the Federal R&D budget in 2018 or \$2.3 billion dollars. From 1982 to 2018, the Federal Government invested \$50 billion dollars in 25,000 awards to small businesses. What a boon to innovation and small business!! We need to do more to publicize Obermayer's contribution to the SBIR program and hopefully this article is a good start.

I am pleased that Dr. Obermayer gave his talk at our symposium because he normally did not talk about the incredible impact of the SBIR/STTR for small businesses. He was clearly a champion for small business. We at NESACS are very proud of the Obermayer's contributions to small businesses which today provide 40% of the jobs for scientists and engineers. ◇



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**The Northeastern Section of the American-Chemical Society, Inc.**

Office: Anna Singer, 12 Corcoran Road,  
Burlington, MA 01803  
(Voice or FAX) (781) 272-1966.  
e-mail: secretary@nesacs.org  
NESACS Homepage:  
http://www.NESACS.org

**Officers 2018**

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Mindy Levine  
35 Cottage St  
Sharon, MA 02067-2130  
(516) 697-9688  
mindy.levine@gmail.com

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(617) 459-5145  
ascholte@gmail.com

*Immediate Past Chair*

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Cambridge, MA  
(617) 304.6474  
leland.johnson@euretos.com

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400 Summit Drive, Burlington, MA 01803  
(781-229-7037),  
Michael.Singer@milliporesigma.com

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Ashis Saha  
67 Bow St  
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(978) 212-5462  
sahaashish1909@gmail.com

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*Photos by Brian D'Amico*

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*by Mindy Levine*

**Cover:** *Professor Gerard Parkin of Columbia University is the 2018 recipient of the James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry. (Photo courtesy of Professor Parkin).*

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## THE NUCLEUS

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*Editor:* Michael P. Filosa, Ph.D., 18 Tamarack Road, Medfield, MA 02052 Email: mpf1952@gmail.com; Tel: 508-843-9070

*Associate Editors:* Myron S. Simon, 60 Seminary Ave. apt 272, Auburndale, MA 02466  
Morton Z. Hoffman, 23 Williams Rd., Norton, MA 02766

*Board of Publications:* Ajay Purohit (Chair), Mary Mahaney, Ken Drew, Katherine Lee

*Business Manager:* Vacant: contact Michael Filosa at mpf1952@gmail.com

*Advertising Manager:* Vacant: contact Michael Filosa at mpf1952@gmail.com

*Calendar Coordinator:* Vacant: contact Michael Filosa at mpf1952@gmail.com

*Photographers:* Brian D'Amico

*Proofreaders:* Donald O. Rickter, Morton Z. Hoffman

*Webmaster:* Roy Hagen, Email: webmaster@nesacs.org

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# Recipients of the James Flack Norris Award 1951–2018

|      |   |      |  |
|------|---|------|--|
| 1951 | George Shannon Forbes                           | 1985 | Derek A. Davenport   |
| 1953 | John Xan  | 1986 | Glenn A. Crosby  |
| 1955 | Harry Nicholls Holmes                           | 1987 | Joseph B. Lambert  |
| 1956 | Norris Watson Rakestraw                         | 1988 | Dana W. Mayo & Ronald M. Pike                                  |
| 1957 | Emma Perry Carr & Mary Lura Sherrill            | 1989 | Jerry R. Mohrig  |
| 1957 | Farrington Daniels                              | 1990 | Joseph A. Schwarcz   |
| 1959 | Herman Irving Schlesinger                       | 1991 | John W. Moore  |
| 1959 | Louis Frederick Fieser                          | 1992 | Jerry A. Bell  |
| 1960 | Louis Plack Hammett                             | 1993 | Arthur C. Breyer   |
| 1961 | Joel Henry Hildebrand                           | 1994 | Samuel P. Massie   |
| 1962 | Ralph Lloyd Shriner                             | 1995 | Michael P. Doyle   |
| 1963 | Avery Allen Ashdown                             | 1996 | Mary Virginia Orna   |
| 1964 | James Arthur Campbell & Lawrence Edward Strong  | 1997 | A. Truman Schwartz   |
| 1965 | Walter John Moore                               | 1998 | Angelica M. Stacy  |
| 1966 | John Arrend Timm & Edgar Bright Wilson          | 1999 | Joseph J. Lagowski   |
| 1967 | Edward Lauth Haenisch                           | 2000 | Billy Joe Evans  |
| 1968 | Samuel Edward Kamerling & William Campbell Root | 2001 | Dennis G. Peters   |
| 1969 | Joseph Edward Mayer                             | 2002 | Zafra Lerman   |
| 1970 | Hubert Newcombe Alyea                           | 2003 | David N. Harpp   |
| 1971 | Charles Lester Bickel                           | 2004 | Richard N. Zare  |
| 1972 | Saul Gerald Cohen                               | 2005 | Morton Z. Hoffman  |
| 1973 | Eugene George Rochow                            | 2006 | Brian P. Coppola   |
| 1974 | Grant Hopkins Harnest                           | 2007 | Diane M. Bunce   |
| 1975 | Leonard Kollender Nash                          | 2008 | David K. Gosser, Jr.; Jack A. Kampmeier, Pratihba Varma-Nelson |
| 1976 | Malcolm Mackenzie Renfrew                       | 2009 | William F. Polik   |
| 1977 | Anna Jane Harrison                              | 2010 | George M. Bodner   |
| 1978 | Paul Doughty Bartlett & Henry C. McBay          | 2011 | Peter Mahaffy  |
| 1979 | Harry Hall Sisler                               | 2012 | Vicente Talanquer  |
| 1980 | Robert C. Brasted                               | 2013 | Melanie M. Cooper  |
| 1981 | Fred Basolo                                     | 2014 | Thomas Greenbowe   |
| 1982 | William Thomas Lippincott                       | 2015 | Frank J. Creegan, Richard S. Moog, James Spencer               |
| 1983 | Bassam Z. Shakhshiri                            | 2016 | Thomas Holme   |
| 1984 | Henry A. Bent                                   | 2017 | Marcy H. Townes  |
|      |   | 2018 | Gerard Parkin ◊  |

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Strem Chemicals

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Bioduro  
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# Monthly Meeting

*The 982<sup>nd</sup> Meeting of the Northeastern Section of the American Chemical Society*

*Presentation of the 2018 James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry*

**Thursday, November 15, 2018**

**Simmons University**

**300 The Fenway, Boston, MA 02115**

The Linda K. Paresky Conference Center, 3rd Floor of the Main College Building

## Agenda:

- 4:30 pm NESACS Board Meeting (Room C118, Linda K. Paresky Conference Center)
- 5:30 pm Social Hour (3<sup>rd</sup> Floor, Paresky Center)
- 6:30 pm Dinner (3<sup>rd</sup> Floor, Paresky Center)
- 7:30 pm Presentation of the ACS Award for Volunteer of the Year
- 7:40 pm **Presentation of the 2018 James Flack Norris Award for Excellence in Teaching to Gerard Parkin, Columbia University.**  
**Title:** *Beyond Lewis Theory in the Teaching of Inorganic Chemistry.*

Please join us for our November Monthly meeting to honor the 2018 recipient of the James Flack Norris Award. The Award, the first national award for outstanding achievement in the teaching of chemistry, was established in 1950 by the Northeastern Section of the American Chemical Society to honor the memory of James Flack Norris, Professor of Chemistry at the Massachusetts Institute of Technology, and a teacher of great repute. It is awarded for Outstanding Achievement in the Teaching of Chemistry and pays tribute to outstanding contributions to the field of chemical education. We will also be honoring Jennifer Maclachan with the Northeastern Section of the ACS 2018 Volunteer of the Year Award. This award recognizes one individual annually for demonstrating extraordinary outreach volunteer service within the section.

**YOU MUST REGISTER IN ADVANCE TO ATTEND THE MEETING; THERE IS NO REGISTRATION FEE**

**TO ATTEND THE MEETING; DINNER RESERVATIONS ARE REQUIRED. PUBLIC IS INVITED**

- For those who would like to join us for dinner, register by noon, Thursday, November 8th, at <https://norris-award-2018.eventbrite.com>
- Cost: Members, \$30; Non-members, \$35; Retirees, \$20; Students, \$10. Dinner reservations not cancelled 24 hours in advance will NOT be refunded (please select Meat, Fish or Vegetarian when registering for dinner). Please also indicate whether Parking will be required.
- If you wish to join us for this meeting and not eat dinner, please register by noon, Thursday, November 8th at <https://norris-award-2018.eventbrite.com> Select "Seminar only".

Please note that Parking will not be reimbursed, but is accessible on Avenue Louis Pasteur. However, Parking may be limited at this address and other local area parking garages may need to be used in the Longwood Area. ◇

# Biography:

Gerard Parkin is a Professor of Chemistry at Columbia University, where he was Chair during 1999 – 2002. He has also served as Chair of the New York Section of the American Chemical Society, Chair of the Inorganic Chemistry and Catalytic Science Section of the New York Academy of Sciences, Chair of the Organometallic Subdivision of the American Chemical Society Division of Inorganic Chemistry, and Chair of the Gordon Research Conference in Organometallic Chemistry. He is an elected Fellow of both the American Chemical Society and the Royal Society of Chemistry and is the recipient of a variety of international awards, including the ACS Award in Pure Chemistry, the ACS Award in Organometallic Chemistry, the RSC Corday Morgan Medal, the RSC Award in Organometallic Chemistry, the RSC Ludwig Mond Award, and the RSC Chem Soc Rev Lecture Award. He is also the recipient of the United States Presidential Award for Excellence in Science, Mathematics

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# Abstract:

*Beyond Lewis Theory in the Teaching of Inorganic Chemistry*

Together with simple electron counting procedures (e.g. the octet and 18-electron rules), the concept of the 2-center 2-electron (2c–2e) bond, and its representation as a solid black line between two atoms in so-called "Lewis structures", have been of immense importance in the development of chemistry. However, despite the significance of the concept of the 2c–2e bond, its limitations as a model are well-known, as illustrated by diborane, which features a 3-center 2-electron (3c–2e). Although the bonding within such molecules may be analyzed by application of either molecular orbital theory or more sophisticated theoretical methods, they lack the convenience of simple electron counting procedures in evaluating the chemical

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# Raj Rajur Receives the 2018 Henry A. Hill Award



Raj Rajur received the 2018 Henry A. Hill Award for Outstanding Service to the Northeastern Section of the American Chemical Society (NESACS) at the October Meeting. The Hill Award was created in 1980 to honor the contributions of Henry A. Hill to NESACS and the American Chemical Society. Henry A. Hill was the first recipient (posthumously) of the award.

Dr. Raj Rajur has been an active and enthusiastic member of NESACS and a member of the Board of Directors since 2002. He has been serving as the Program Chair for the Medicinal Chemistry section of NESACS since 2002. During his tenure he has made significant changes to format of the symposium establishing the signature event "Advances in Chemical Sciences Symposium Series", that continues to attract more than 400 attendees annually. He has also regularly represented NESACS at the National ACS meetings and participated in its governance meetings. Dr. Rajur remains a keen participant in the ACS Department of Career Services, mentoring and coaching ACS members at the national meetings. His vision for Med Chem group remains bringing in top notch science to the symposia and to help drive the establishment of a Medicinal Chemistry prize which would enable the recognition of an important local medicinal chemist annually at the May symposium.

Dr. Rajur holds a PhD degree in synthetic organic chemistry and has enjoyed a distinguished career in the academic community and the pharmaceutical industry with a broad range of expertise in medicinal chemistry and drug discovery fields specifically targeted towards cancer, diabetes and anti-infective therapeutics. He has authored more than 30 papers in peer-reviewed journals and holds several US patents. Dr. Rajur's academic career includes appointments at the Southwestern Medical Center in Dallas, Boston College, Northeastern University, Massachusetts General Hospital and Harvard Medical School. In the industrial sector, he has held scientific and managerial positions at ArQule and Millipore Corporations. At ArQule, Dr. Rajur supervised collaborations with Bayer, Pfizer and Amersham Pharmacia Biosciences. Dr. Rajur also significantly contributed to ArQule's internal drug discovery programs, specifically the ion channel, kinase and GPCR programs. Products co-developed by Dr. Rajur have been used in drug discovery efforts at VetOncoRx and Clonotech Laboratories.

Presently, Dr. Rajur heads up CreaGen Inc as CEO, which he launched in 2003 in order to provide early stage drug discovery services to biotech, pharmaceutical companies and academic institutes. Since its inception he grew CreaGen from a one-person company to its current 20 people organization. He has established more than 50 strategic alliances with pharmaceutical, biotechnology companies and Federal research laboratories.

With over 25 years of experience in biotechnology management and entrepreneurial ventures involving Drug discovery he helped launch CreaGen Life Science Incubator in 2013, a division of CreaGen that provides infrastructure and instrumentation to early stage companies to conduct their proof of concept. In 2017, the life science incubator was rebranded as C2I Accelerator to provide

mentoring and seed funding to start-up companies. At the C2I accelerator, he is responsible for venture capitalization and business development. Dr. Rajur has also co-founded a biometric technology company "Face pay" which is currently developing a POC for the technology. Dr. Rajur serves as the reviewer for the ACS Journal of Medicinal Chemistry and Journal of Pharmaceutical Sciences, he is on the Board of Directors for Vet OncoRX, Augusta Pharmaceuticals, TME Therapeutics and co-chair for the Massachusetts Biotechnology CROCMO forum. ◇

## CAREER DEVELOPMENT

Being an active participant in NESACS activities will enable you to network with major institutions and corporations in our area and can open up new career opportunities.

The NESACS Board of Publications, which is responsible for both the *Nucleus* newsletter and the NESACS website, is looking to increase its activities in this arena.

We would like to expand our capabilities for keeping our membership informed on what is happening in our field and how to adapt to changing times and new technologies.

You can help us do that. All we ask of you is a few hours a month and a smile.

Call or email to see what opportunities are available.

contact -- Michael Filosa  
NESACS Board of Publications  
Phone - 508-843-9070

Email [mpf1952@gmail.com](mailto:mpf1952@gmail.com)

Q. Exactly, how many awards and scholarships does NESACS sponsor?

A) One    b) Two    c) Many

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

# American Chemical Society 256th ACS National Meeting Boston, Massachusetts August 19-23, 2018

## Councilor Talking Points: Summary of Governance Issues and Actions

The following summary is provided to help Councilors report to their Local Sections and Divisions on key actions of the ACS Council meeting held August 22, 2018, and the Board of Directors meetings held August 17-19, 2018, at the 2018 ACS fall national meeting in Boston, Massachusetts. Full reports are posted on the ACS Website as they become available.

### Actions of the Council

#### Election Results: Elected Committees of Council

- By electronic ballot, the Council elected Ella L. Davis, Lissa A. Dulany, Lisa Houston, and Martin D. Rudd for three-year terms (2019-2021), and Will E. Lynch for a one-year term (2019) on the Council Policy Committee (CPC).

|                      |     |
|----------------------|-----|
| Lawrence J. Berliner | 103 |
| Michelle V. Buchanan | 185 |
| Alan B. Cooper       | 191 |
| *Ella L. Davis       | 196 |
| *Lissa A. Dulany     | 201 |
| Lydia E. M. Hines    | 194 |
| *Lisa Houston        | 231 |
| *Will E. Lynch       | 195 |
| *Martin D. Rudd      | 220 |
| Barbara P. Sitzman   | 163 |

- By electronic ballot, the Council elected Allison Aldridge, Christopher J. Bannochie, Mary K. Engelman, Silvia Ronco, and Frankie K. Wood-Black for three-year terms (2019-2021) on the Committee on Nominations and Elections (N&E).

|                           |     |
|---------------------------|-----|
| *Allison Aldridge         | 216 |
| *Christopher J. Bannochie | 228 |
| *Mary K. Engelman         | 222 |
| Kenneth P. Fivizzani      | 162 |
| Anne M. Gaffney           | 187 |
| David S. Gottfried        | 136 |
| James M. Landis           | 189 |
| R. Daniel Libby           | 135 |
| *Silvia Ronco             | 206 |
| *Frankie K. Wood-Black    | 220 |

- By electronic ballot, the Council elected Rodney M. Bennett, Jacqueline A. Erickson, Judith M. Iriarte-Gross, Donovan R. Porterfield, and Carolyn Ribes for three-year terms (2019-2021) on the Committee on Committees (ConC).

|                    |     |
|--------------------|-----|
| *Rodney M. Bennett | 189 |
|--------------------|-----|

|                          |     |
|--------------------------|-----|
| Richard S. Danchik       | 92  |
| *Jacqueline A. Erickson  | 217 |
| Rick Ewing               | 176 |
| *Judith M. Iriarte-Gross | 214 |
| Russell W. Johnson       | 114 |
| *Donivan R. Porterfield  | 206 |
| *Carolyn Ribes           | 328 |
| Frank Romano             | 171 |
| Peter Zarras             | 119 |

### Other Council Actions

#### Amendments to the ACS Bylaws

A recommendation by the Committee on Membership Affairs that Council approve the Petition on International Chemical Sciences Chapters achieved the two-thirds majority required to amend Bylaw XI, Section 3 accordingly (additions underlined; deletions struck through):

Affiliations of SOCIETY Local Sections or Divisions shall become effective upon authorization by their governing body, approval by their respective Council committees governing Local Sections and Divisions, and by confirmation by the Council Committee on Constitution and Bylaws acting for the Council, that the provisions of Section 1 of this Bylaw are met.

The changes will become effective upon confirmation by the Board of Directors.

A recommendation by the Committee on Membership Affairs that Council approve the Petition on International Chemical Sciences Chapters achieved the two-thirds majority required to amend Bylaw IX, Section 4 accordingly (additions underlined; deletions struck through):

An International Chemical Sciences Chapter shall receive no allotment of funds from the SOCIETY and shall not be entitled to elected representation on the Council. A Chapter may assess its members local Chapter dues to be expended for its own purposes in harmony with the objects of the SOCIETY.

The changes will become effective upon confirmation by the Board of Directors.

#### Continuation of Committee

On the recommendation of the Committee on Committees, and the concurrence of the Council Policy Committee, Council approved the continuation of the Committee on Chemical Safety, subject to concurrence by the Board of Directors.

#### Resolutions

The Council passed resolutions

- in memory of deceased Councilors;

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## National Meeting

Continued from page 7

- congratulating ACS Treasurer and Chief Financial Officer Brian A. Bernstein on the occasion of his retirement after nearly 40 years of service to the Society (34 as ACS Treasurer);
- in gratitude for the officers and members of the Northeastern Section, host Section for the 256th National Meeting, the divisional program chairs and symposium organizers, and ACS staff; and
- acknowledging Peter K. Dorhout's service as ACS President and presiding officer of the Council.

### Special Discussion

President Dorhout introduced and led a special discussion on what role(s) ACS should play in preventing sexual harassment in the sciences. He highlighted several recent articles, workshops and studies that have called attention to the issue, notably a symposium, "Science of Sexual Harassment" organized during the ACS National Meeting in New Orleans (Spring 2018) by the Women Chemists Committee and Chemical & Engineering News; and a National Academies of Sciences, Engineering, and Medicine consensus study report: "Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine" (2018). He directed Council's attention to existing ACS codes and initiatives to address sexual harassment, and offered items for discussion and possible action:

- More signs/information at National Meetings regarding our policies and supporting information
- Trained volunteers at national meetings for reporting sexual harassment
- A webinar on preventing sexual harassment for local sections or divisions

To further inform the discussion and Councilor input, a brief survey was conducted using the audience electronic response system. The results of the survey are listed below. The ACS Volunteer/National Meeting Attendee Conduct Policy was in the Council Agenda, and can be found online at [<http://www.acs.org/content/acs/en/about/governance/councilors.html>] A summary of the discussion and additional information will be sent to Councilors at a later time.

Have you ever witnessed or experienced sexual harassment at an ACS meeting or ACS event? (413 responses)

**Yes** 23% (94)      **No** 77% (319)

Have you ever witnessed or experienced sexual harassment at an ACS meeting or ACS event, or in your professional workplace or learning environment? (182 women / 223 men responded)

| Women |           | Men       |  |
|-------|-----------|-----------|--|
| Yes   | 77% (141) | 57% (127) |  |
| No    | 23% (41)  | 43% (96)  |  |

How familiar are you with the ACS Codes and initiatives for professional conduct? (417 responses)

|                  |           |
|------------------|-----------|
| Very Familiar    | 38% (157) |
| Vaguely Familiar | 46% (192) |
| Not Familiar     | 16% (68)  |

Has your local section or division instituted a sexual harassment policy of its own? (419 responses)

|            |           |
|------------|-----------|
| Yes        | 3% (12)   |
| No         | 73% (309) |
| Don't Know | 23% (98)  |

### Highlights from Committee Reports Nominations and Elections

The Committee on Nominations and Elections solicits Councilors' input of qualified individuals for President-Elect and/or Directors for future consideration. Suggestions can be sent to [nomelect@acs.org](mailto:nomelect@acs.org).

Ballots for the 2018 fall national election will be distributed October 1-3, with a voting deadline four weeks later, on October 31. ACS members eligible to vote and with an email address on file will receive an electronic ballot with the option to request a paper ballot. Those members with no email address on file will be sent a paper ballot but with the option to vote electronically. The ACS election vendor, Survey & Ballot Systems, will send three email reminders during the voting period to those who have not voted as of the reminder date.

### Budget and Finance

The Society's 2018 Probable 1 Projection calls for a Net from Operations of \$31.8 million. This is \$1.3 million favorable to the Approved Budget. Total revenues are projected to be \$565.1 million, which is \$5.7 million or 1.0% favorable to the Budget. Total expenses are projected at \$553.3 million, which is \$4.4 million or 0.8% unfavorable to the Budget.

The Committee considered one 2019 program funding reauthorization request, and on its recommendation, the Board subsequently approved funding the ACS Festival Series for inclusion in the 2019 Proposed Budget and the 2020-2021 Forecast Budgets.

The Society is expected to end the year in compliance with each of the five Board-established financial guidelines. Additional information can be found at [www.acs.org](http://www.acs.org), at the bottom of the page, click 'About ACS', then 'Financial'.

### Boston Meeting Attendance

The theme of the 256th ACS National Meeting was "Nanoscience, Nanotechnology, and Beyond." As of Tuesday evening, August 21, attendance was:

|            |        |
|------------|--------|
| Attendees  | 8294   |
| Students   | 3671   |
| Exhibitors | 1181   |
| Expo only  | 576    |
| Guest      | 513    |
| Total      | 14,235 |

### Membership Affairs

As of August 21, ACS had 149,584 members, which is a decline of only eight-tenths of one percent from the over 150,000 members in 2017. This year-to-date figure represents an increase of over 1,200 members when compared to the last two

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## National Meeting

*Continued from page 8*

years. It was noted that five of last seven months have been respectively the best months for membership since at least 2014. The current membership count positions ACS for a strong close to the year, and there is cautious optimism that total membership will rise for the first time since 2011.

### **Petitions to Amend the Constitution and Bylaws**

New petitions to amend the Constitution or Bylaws must be received by the Executive Director & CEO no later than December 12 to be included in the Council agenda for consideration at the spring 2019 meeting in Orlando. Contact the Committee on Constitution and Bylaws with any questions or requests for information at [bylaws@acs.org](mailto:bylaws@acs.org)

### **Actions of the Board of Directors**

#### **The Board's Executive Session**

At this meeting, the ACS Board of Directors focused on a number of key strategic issues and took several related actions.

#### **The Board's Committees**

The Board of Directors received and discussed reports from its committees on Corporation Associates, Professional and Member Relations, Executive Compensation, the Governing Board for Publishing, and the Society Committee on Budget and Finance. On the basis of those reports and with regard to the Board's strategic vision for the Society:

- The Board approved, on the recommendation of the Committee on Professional and Member Relations, the Society's nominees for the 2019 Perkin Medal and the 2019 National Science Board Public Service Award.
- The Board voted to approve the appointments or reappointments of several editors-in-chief for ACS journals as recommended by the Joint Board-Council Committee on Publications and Editor Selection Committees. Information about those appointments will appear in C&EN once the individuals concerned have been notified.
- In light of the recent financial performance of the technical-meeting component of our national meetings, the Board voted to approve an advance member registration fee of only \$490 for national meetings held in 2019 (i.e., the current advance member registration fee escalated to account for inflation only); to reauthorize a program funding request for the Chemistry Festival program; and in accordance with past practice, to allocate on a pro-rated basis to qualified ACS Divisions any net revenues accrued to the Society from the 2020 and future International Chemical Congresses of the Pacific Basin Societies (Pacifichem).
- The Board liaison to the Committee on Corporation Associates presented a proposed committee Future State Operating Model and considered options for committee member terms and appointment processes. The Board expressed support for the value of industry to ACS and acknowledged Corporation Associates as being positioned within the Society to represent the voice of industry to the Board and ACS.

- The Board's Society Programs global liaison offered an update on efforts to strengthen the global presence of Society programs to better serve our international members and the global chemistry enterprise. Efforts are underway to clarify and articulate the current state of international activities, products, and services; to clarify the challenges associated with globalization of existing domestic activities; and to offer recommendations for moving forward. Next steps include interviewing key stakeholders, reviewing past efforts, and exploiting existing market research with a view toward developing a strategic plan, activities, and timelines for Board consideration.
- The Board liaison to the Leadership Advisory Board (LAB) provided an update on initial efforts geared towards the development of a next-generation ACS Leadership Program. A small task force has been charged with investigating the state of the art in leadership development, assessing the future needs of the Society as well as those of individual members and their employers, and then proposing, by the end of 2019, a strategic vision for and the specifications of a next-generation ACS leadership program focused on 2030 and beyond.

### **Executive Director and CEO Report**

The Board also received an extensive report from the Executive Director and CEO on issues relating to Passion for Chemistry and Diversity and Inclusion as core values of the Society, on Membership, ACS financial performance, and upcoming events and activities. He reported there has been initial success with several initiatives underway to address and reverse the decline in membership. His direct reports provided updates to the Board on the activities of Chemical Abstracts Service (CAS), the ACS Publications Division, and the Office of the Secretary and General Counsel. As part of his report, he also invited the Executive Vice President for Human Resources to brief the Board on the activities, opportunities and challenges of the Human Resources Division.

### **Other Society Business**

The Board approved the foundation documents of the newly created endowment for the Henry H. Storch Award in Energy Chemistry, which originally was established as a national award in 1964.

As is customary, the Board heard reports from members of the Presidential Succession on their current and planned activities for 2018-2019. Several presidential symposia and events incorporating and supporting this national meeting's theme of "Nanoscience, Nanotechnology & Beyond" were highlighted in those reports.

### **The Board's Regular Session**

The Board held a well-attended regular session on Sunday, August 19, that featured a presentation by Nobel Laureate Sir Fraser Stoddart who spoke on transformative research and reviewed his contributions in supramolecular chemistry and molecular recognition. Also, as a Champion of the program, he advocated for ACS Project SEED on the 50th Anniversary of the program. Prior to the presentation, members of the presi-

*photos continued on page 14*

# September 2018 Monthly Meeting

By Mindy Levine, 2018 Chair, Northeastern Section of the American Chemical Society, Photos by Brian D'Amico.

On September 20, 2018, the monthly meeting of the Northeastern Section of the American Chemical Society took place. This meeting was held at Salem State University, in Salem, MA, and one of the goals of the meeting was to be able to view the archives of the Section, currently housed in the Salem State University library. Several members of the NE-SACS board took advantage of this opportunity to view important archives, including notes from the first meeting, brochures and pamphlets from previous Section events, and photos of key contributors to this important section. Many thanks to Susan Edwards of Salem State University who continues to care for these archives, and to Ken Mattes of the NE-

SACS board for coordinating this important effort.

After the tour of the archives and the social hour, the meeting continued with recognizing 50-, 60-, and 70-year members of the Section. We are particularly honored to have recognized Dr. Merrill Cohen, a World War II veteran and 70-year member of ACS. Finally, the keynote speaker of the evening, Sam Kean, delivered a highly engaging lecture, in which he mentioned several of the books he has authored. Many of the books were available for sale after the lecture.

We are thrilled so many members came out for this meeting, and look forward to more exciting monthly meetings and events! ◇

*continued on page 11*



2018 NESACS Chair, Mindy Levine, introduces Sam Kean, Science writer and the meeting's keynote speaker.



Sam Kean delivering his keynote address about his book of stories about the periodic table: "The Disappearing Spoon".



60-year member Alice Joan Adler with NESACS Program Chair Andrew Scholte and Mindy Levine.



70-year member Merrill Cohen with NESACS Program Chair Andrew Scholte and Mindy Levine.



# September 2018 Monthly Meeting

Continued from page 10



60-year member William Eykamp



60-year member John T. Penniston



50-year member Eugene Barry Wilusz



50-year member Glen Ernest Rodgers



50-year member Anthony P. Wright



50-year member Joseph Eugene Lester



# Photos from the 2018 GDCh-NSYCC Exchange - Boston

Photos by Brian D'Amico



Participants in the 18th exchange between the NESACS Younger Chemists Committee (NSYCC) and their German counterpart from the GDCh.



The German visitors and their hosts from NESACS enjoyed a full range of activities including a visit to Cape Cod on Thursday. The trip to the Cape included a visit to Woods Hole Oceanographic Institute, a clambake at Goodwill Park and a beach outing at Surf Drive Beach. Other activities included a Welcome Dinner on Saturday, a Sunday social mixer with the National YCC at the Back Bay Social Club, a Monday night gathering at Harpoon Brewery, a Red Sox game on Wednesday, and a Farewell Dinner and Boston Harbor Cruise on the Odyssey.

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# 2018 GDCH-NSYCC Exchange

Continued from page 12



At the Monday gathering at the Harpoon Brewery.



The group pays close attention to a presentation on Underwater Robotics at the Woods Hole Oceanographic Institute.



Jens Breffke in discussion with our guests prior to the welcome dinner.



Enjoying the social hour on the Odyssey prior to the farewell dinner.



Part of the discussion at the Back Bay Social Club with the National YCC.



The Farewell Dinner on the Odyssey.

# Medicinal Chemistry Group Hosts Symposium on The Future of Anti-Infectives

by Mindy Levine

On Thursday September 13, 2018, approximately 70 medicinal chemists (and other chemists interested in medicinal chemistry) gathered together at Takeda Pharmaceuticals for a half-day symposium on the topic of "The Future of Anti-infectives." This symposium was sponsored by Takeda Pharmaceuticals and was organized by the Medicinal Chemistry Group of the Northeastern Section of the American Chemical Society. The medicinal chemistry group, organized by Dr. Raj Rajur of Creagen Bio and Dr. Andrew Scholte of Sanofi, hosts half-day symposia twice a year, in September and in December, at a variety of pharmaceutical companies throughout the greater Boston area.

The full speaker lineup for the September event is shown below:

Afternoon speakers:

- Kim Lewis, Northeastern University, Title: *Reviving Antibiotic Discovery from Natural Products*
- Thomas Durand Reville, Entasis, Title: *The rational design and discovery of ETX2514, a novel broad-spectrum  $\beta$ -lactamase inhibitor for the treatment of Gram-negative infections*
- Roger Clark, Macrolide, Title: *Novel Macrolides for Gram-Negative Infections*

After the afternoon speakers, there was a break for social hour and dinner, fol-

## National Meeting

*Continued from page 9*

dential succession and the Executive Director & CEO offered brief reports on their activities. The officers provided more extensive reports on their activities and future plans as part of their written and oral reports to the Council.

### SUPPLEMENTAL INFORMATION FOR COUNCILORS

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Peter K. Dorhout, President,  
p.dorhout@acs.org

Bonnie A. Charpentier,  
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b.charpentier@acs.org

Allison A. Campbell,  
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a.campbell@acs.org

#### Online Information for Councilors

<http://www.acs.org/content/acs/en/about/governance/councilors.html>

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lowed by the plenary evening lecture presented by Jacques Dumas of Tetrphase. The title of the talk was "TP-6076: taking chemistry to the next level to beat superbug."

Overall, the attendees had uniformly positive things to say about the symposium, with attendees highlighting the timeliness of the topic, the relevance to their careers, and the important networking opportunities provided through attending these symposia.

Stay tuned for the next medicinal chemistry symposium, coming in December 2018! ◇

## Biography

*Continued from page 5*

and Engineering Mentoring, the United States Presidential Faculty Fellowship Award, the Columbia University Presidential Award for Outstanding Teaching, and the Lenfest Distinguished Columbia Faculty Award. ◇

## Abstract

*Continued from page 5*

reasonableness of a covalent molecule. Fortunately, approaches for analyzing complex covalent molecules in a simple way are available, and their use in the application in the Covalent Bond Classification of molecules will be discussed. ◇

### THE COMMITTEE ON CHEMICAL ABSTRACTS (CCAS) WANTS YOUR FEEDBACK

Visit our page on ACS Network:

<https://communities.acs.org/groups/chemical-abstracts-service-committee>

or contact Michael Filosa with any suggestions at [mpf1952@gmail.com](mailto:mpf1952@gmail.com)

### Looking for seminars in the Boston area?

Check out the NESACS Calendar

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

### The NESACS website

Updated frequently · Late-breaking news · position postings  
Back issues of the Nucleus archived · Career-related Links · Awards and Scholarships

[WWW.NESACS.org](http://WWW.NESACS.org)



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

<http://www.bc.edu/schools/cas/chemistry/seminars.html>  
<http://www.bu.edu/chemistry/seminars/>  
<http://www.brandeis.edu/departments/chemistry/events/index.html>  
<http://chemistry.harvard.edu/calendar/upcoming>  
<http://www.northeastern.edu/cos/chemistry/events-2/>  
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<http://chem.tufts.edu/seminars.html>  
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<http://www.chem.umb.edu>  
<http://www.umassd.edu/cas/chemistry/>  
<http://www.uml.edu/Sciences/chemistry/Seminars-and-Colloquia.aspx>  
<http://www.unh.edu/chemistry/events>  
<https://www.wpi.edu/academics/departments/chemistry-biochemistry>

### November 01

**Novartis Lecture in Organic Chemistry**  
Prof. Shankar Balasubramanian (Cambridge) &  
Dr. Chris Gampe (Novartis)  
*"The Ends Justify the Means: Tweaking mRNA Properties"*  
MIT, 6-120, 4:00 pm

### November 02

Prof. Tom Baker (University of Ottawa)  
Boston College, Merkert 130, 4:00 pm

### November 05

Prof. Eric Hudson (UCLA)  
Harvard, Pfizer Lecture Hall, 4:15 pm

Prof. Ursula Jakob (Michigan)  
MIT, 4-270, 4:00pm

Prof. Katherine Mirica (Dartmouth)  
Brandeis, Gerstenzang 121, 3:40 pm

Prof. Yisong Guo (Carnegie Mellon)  
Boston Univ., Metcalf 113, 4:00 pm

### November 06

Prof. Neil Garg (UCLA)  
Boston College, Merkert 130, 4:00 pm

Prof. Thomas Mallouk (Penn State)  
*"Managing Electrons and Protons in the Bio-Inspired Production of Fuel from Sunlight"*  
Univ. New Hampshire, Parsons N104, 11:10 am

Prof. Rob Spitalo (UCal-Irvine)  
Tufts, Pearson P-106, 4:30 pm

### November 07

Prof. John Matson (Virginia Tech)  
Boston College, Merkert 130, 4:00 pm

Prof. Smaranda C. Marinescu (USC)  
MIT, 4-370, 4:15 pm

### November 12

Prof. Raymond Schaak (Penn State)  
Boston Univ., Metcalf 113, 4:00 pm

### November 13

Prof. Robert Knowles, (Princeton)  
Boston College, Merkert 130, 4:00 pm

### November 14

Prof. Mohammad Seyedsayamdost, (Princeton)  
Boston College, Merkert 130, 4:00 pm

Prof. Brandi Cossairt (Washington)  
Harvard, Pfizer Lecture Hall, 4:15 pm

Prof. William Epling (Virginia)  
Sulfur Oxidation over Automotive Catalysts  
WPI, Goddard 127, 12:00 noon

### November 15

Prof. Bingjun Xu (Delaware)  
Boston College, Merkert 130, 4:00 pm

### November 19

Prof. Amie K. Boal (Penn State)  
*"Watching Metalloenzymes at Work"*  
MIT, 4-270, 4:00 pm

Prof. Lasse Jensen (Penn State)  
Boston Univ., Metcalf 113, 4:00 pm

### November 20

Prof. Wayne Jones (UNH)  
Univ. New Hampshire, Parsons N104, 11:10 am

Prof. Sachdev Sidhu (Toronto)  
Tufts, Pearson, P-106, 4:30 pm

### November 27

Prof. Jacob Shelley (RPI)  
Univ. New Hampshire, Parsons N104, 11:10 am

Prof. Adriaan Bax (NIH)  
*"Opportunities and challenges of pressure-jump NMR spectroscopy in the study of protein folding"*  
MIT, 6-120, 4:00 pm

### November 28

Professor Peng Yin, Harvard University  
Boston College, Merkert 130, 4:00 pm

Prof. Serena DeBeer (Max Planck)  
Harvard, Pfizer, 4:15 pm

Prof. Kristi Kllick (Delaware)  
*"Biopolymeric Conjugates in the Production of Responsive Biomaterials"*  
WPI, Goddard 227, 12:00 noon

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