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NESACS

THE NUCLEUS

May 2021 *Vol. XCIX, No. 7*

2021 NESACS Election

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An ACS Scholar at M.I.T.

Strem Chemicals Acquired

Ascensus is new owner

Bill Carroll, 2005 ACS President

Strem Chemicals Acquired - Ascensus is new owner

By Craig Sergeant

It was with great surprise that I recently learned that long-time entrepreneur and local Massachusetts resident, Mike Strem, had sold Strem Chemicals, Inc. During my time at Alfa Aesar and Thermo Fisher Scientific, we always thought of Strem Chemicals as an excellent and high quality provider of specialty chemicals, especially inorganics and organometallics. I even had the chance to visit its facility in 2018 in Newburyport with some of my colleagues. We all were very impressed with the excellent staff and manufacturing equipment. As anyone who has been in the fine chemicals business knows, it is a very small world, and often a competitor is also a vendor. As much as we competed with Strem Chemicals, we also would purchase reagents as needed to satisfy our customer's requirements.

Speaking of a small world, the acquiring company, Ascensus Specialties LLC, also has a very interesting history that starts back in 1957 here in New England, in Danvers, MA, when sodium borohydride was first commercially produced at a facility owned by Metal Hydrides, Inc. (Metal Hydrides itself has a fascinating history. Founded in the mid-1930s, it purchased land in Beverly, MA, in 1939 to become a major refiner of uranium-238 for the Manhattan Project during World War II. I still have a set of Organic Syntheses published by Wiley with stamps for the Metal Hydrides company library.) It is here where things get interesting for me personally. In 1962, Alfred Bader, founder of Aldrich Chemicals, entered his company into a 50:50 joint venture with Metal Hydrides for the production of smaller catalog quantities of inorganic fine chemicals. This led to the establishment of Alfa Inorganics (yes, Alfa, not Alpha due to *Alf*red Bader's influence). In 1965, Metal Hydrides became the Ventron Corporation, which, in turn, was purchased by the Thiokol Corporation and then became Morton Thiokol, Inc., in the early 1980s after merging with Morton International. This is, indeed, the same Morton Salt that you can buy today in your local supermarket.

It was until about 1989 that Alfa Products and the large production facility for sodium borohydride existed in the same company. Thereafter, Alfa Products was sold to Johnson Matthey to merge with their Aesar chemical catalog business, and become Alfa Aesar, Inc., which was then sold to Thermo Fisher Scientific in 2015.

Sodium borohydride production continued with Morton International when Rohm and Haas (remember them?) acquired Morton in 1999. It was after Dow had acquired Rohm and Haas in 2009, what is now Ascensus bought the sodium borohydride production business in 2015 from Dow.

At this point, we need to bring Strem Chemicals back into this story. As long-time and recently retired Purchasing Manager for Alfa Aesar, Patti Ranta, recently related to me, in 1964, Mike Strem started out in Danvers producing reagents in the same building off Route 114 in Danvers as the Metal Hydrides business, and would put the product in the truck before driving around the building to deliver to the Alfa Products chemical catalog business. Alfa was purchasing from Strem from the very beginning!

It is only fair that I quote a bit from the press release about the acquisition of Strem Chemicals. Mike Strem, the Founder of Strem Chemicals, related, "We thoughtfully chose Ascensus as the partner for the next phase of Strem's growth. Our employees' interests and well-being have been my top priority, and the strong cultural fit will provide opportunities for our team. The additional resources and global reach of Ascensus will deliver Strem's strong capabilities to an even broader audience of customers."

Another well-known aspect of Strem Chemicals has been the excellent morale of its employees. When I met them at trade shows, or during that visit years ago in Newburyport, I could easily see that Mike Strem had made employee well-being a high priority. I therefore, indeed, believe Mike Strem when he says that his employees' interests are a top priority. Having been through an acquisition myself, I can truly understand the anxiety that comes with it. I certainly wish all the best for the employees in the Newburyport facility and much success to Ascensus Specialties. ◇

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THE NUCLEUS

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New ACS Membership Options Coming in 2022

Starting on January 1, 2022, current and prospective ACS members will be able to choose from new membership packages that feature different levels of benefits. No matter where you are in your academic or professional life, these new options will provide you with more flexibility to choose the package that's the best fit for you, and with dues that are lower than they are today. There will also be a no-dues option, but which will include limited benefits. More details will be available in a few months, so stay tuned. ◇

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Register Now for the Green Chemistry & Engineering Conference

Registration is open for the 25th Green Chemistry & Engineering (GC&E) Conference. Organized by the ACS Green Chemistry Institute and the GC&E Conference Advisory Committee, this virtual conference will feature more than 38 sessions that will cover a variety of timely topics, with daily keynote speakers, poster sessions, dedicated networking time, happy hours, and opportunities to engage with speakers, sponsors, and attendees.

Last year's successful event brought together almost 5,000 attendees from 99 countries. The GC&E Conference will take place on a virtual platform from **June 14-18, 2021**. Visit the conference website <https://www.gcande.org/> for the latest information and online registration. ◇

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

A) One b) Two c) Many

www.nesacs.org/awards

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Monthly Meeting

The 1,004th Meeting of the Northeastern Section of the American Chemical Society

What I Learned: Forty Years of Acquired Knowledge That Has Nothing To Do With Science

Thursday – May 13th, 2021

4:30 pm

Dr. William F. Carroll, Jr.

2005 ACS President

4:30 - 5:45 May Board meeting

5:45 - 6:30 Break for dinner

6:30 - 7:00 Virtual Networking

7:00 Education Night Meeting

- Raj (SB) Rajur, NESACS Chair
- Comments by Bill Carroll, 2005 ACS President
- Award Presentations: High School and College Students and Teachers

Zoom Link

https://american-chemical-society.zoom.com/meeting/register/tZUuduGvpjojHtQqDgL-2VBlqC-897A-V4QZ ◇

Biography:

Dr. William F. Carroll, Jr., holds a Ph.D. in Organic Chemistry from Indiana University, Bloomington, IN. He retired from Occidental Chemical Corporation in 2015 after 37 years and now heads his own company, Carroll Applied Science, LLC. He is also Adjunct Professor of Chemistry at Indiana. Bill has served as President and as Chair of the Board of Directors of the American Chemical Society (ACS), one of three living members to hold both offices. He is a Fellow of ACS, as well as the American Association for the Advancement of Science (AAAS) and the Royal Society of Chemistry (RSC). In 2009, he was chair of the Council of Scientific Society Presidents. Bill has received Distinguished Alumni Awards from both Indiana and DePauw, and has over seventy-five publications in the fields of organic electrochemistry, polymer chemistry, combustion chemistry, incineration, plastics recycling, sustainability and … popular music history and analytics. ◇

Abstract:

One of the things attributed to Yogi Berra that he probably never said is, "You can observe a lot just by watching." A corollary that he probably never said either is, "Pay attention to what's going on around you; you might learn something." Personally, I've tried to take both of those non-Yogi-isms to heart. This talk is about some of the bits of what I hope are wisdom that I accumulated in forty years in the chemical industry as a scientist, a manager, a spokesperson, an advocate, a diplomat and an ACS volunteer. All of it is useful inside or outside the chemical industry. ◇

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DMPK Scientist,
LC/MS Product Specialist,
Mass Spec Operator,
Staff Investigator,
Process Chemist,
QA Manager,
Synthetic Chemist,
Lab Instructor . . .

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WWW.NESACS.ORG

MEDCHEM

Northeastern Section
American Chemical Society
(NESACS)

Webinar

"Design Concepts for DELs in Drug Discovery"

By Matt Clark

Organized by the Medicinal Chemistry Section of the Northeastern Section, American Chemical Society (NESACS)

Thursday – May 20th, 2021

4:00 pm

Register for the February Webinar meeting at:

https://american-chemical-society.zoom.us/webinar/register/WN_puX2h6DoRTG7IRO_iy843Q

SPEAKER
Matt Clark
SVP of Research, XChem

Biography Matt joined X-Chem in 2010 and has served as VP of Chemistry and SVP of Research. Before coming to XChem, Matt was Director of Chemistry at Praecis Pharmaceuticals, where he played a key role in the early development and implementation of the DNA-encoded library (DEL) platform. Praecis was acquired in 2007 by GlaxoSmithKline, where he led a group responsible for design and synthesis of DNA-encoded chemical libraries. Matt has helped X-Chem become the recognized leader in DEL technology. A thought leader in the DEL space, he has numerous patents and key DEL publications to his name. Matt received his B.S. in Biochemistry from the University of California, San Diego, and his Ph.D. in Chemistry from Cornell University. He conducted post-doctoral studies at the Massachusetts Institute of Technology.

Abstract: DEL technology offers an unprecedented opportunity for chemists to explore vast diversity in chemical space. In many cases, the drive for increased library diversity runs counter to established guidelines around physicochemical properties and developability. In this talk, strategies for overcoming this tension will be described.

Symposium Organizing Committee: Brian Aquila, Mark Ashwell, Scott Edmondson, Dan Elbaum, Jeremy Green, Paul Greenspan, Adrian Hobson, Blaise Lippa, Lisa Marcaurelle, Min Lu, Kap-Sun Yeung, Andrew Scholte, Mala Gopalsamy, Raj (SB) Rajur (Chair)

Visit: http://www.nesacs.org/medchem.html

NESACS 2021 Election

Candidate Statements

Chair-Elect

Ray Lam

Education: M.Sc. Chemistry with Industrial Experience, University of Bristol, UK (2004); Ph.D. Inorganic and Materials Chemistry, University of Bristol, UK (2008)

Professional Experience: Associate Professor, Massachusetts Maritime Academy (2013–Present); Chapter Director, Massachusetts State College Association (2020–Present); Adjunct Faculty, Emanual College, MCPHS University (2012¬–2013), Providence College (2011–2012); Postdoctoral Research Associate, University of Pittsburgh (2008–2010)

NESACS Service: Chair, National Chemistry Week (2016¬–Present); Alternate Councilor (2021–Present)

Honors: ACS Local Section 2020 Outreach Volunteers of the Year

Statement: Ever since I moved to the United States in 2008 I have been volunteering at different local organizations. I found that volunteering was a meaningful use of my spare time and a wonderful way for me to meet new people and contribute to the community. My involvement with NESACS started back in 2013 when I volunteered at the National Chemistry Week (NCW) event at the Museum of Science, Boston. I was a junior faculty and wanted to expand my network and be involved in chemistry outreach programs. Once I experienced the level of audience engagement at NCW events, I was hooked.

Since 2016 I have been serving as NCW Chair for our section. I have continued the tradition of collaborating with our museum partners, college and high school chemistry clubs, and local industries. Our mission has always been to bring the wonders of chemistry and joy of discovery to our audience. Our section is blessed with a community of very euthanistic volunteers and our annual events have frequently been selected as finalists for the Chemluminary awards in recent years. As of 2021, I am also an alternate councilor for the section. I have just completed the initial training provided by ACS and I look forward to further contributing to NESACS.

Because I was born in Hong Kong and then studied for 15 years in England before moving to the United States, I am familiar with culture shock and how to adapt to it. Working with the diversity of people who volunteer at and visit museums helped me truly appreciate how science can be the common language to bring people together. With the recent events and

Ray Lam continued on page 8

Sonja Strah-Pleynet

Education: Ph.D. Organic Chemistry, 1996; M.S. Organic Chemistry, 1993; B.S. Chemistry, 1990, University of Ljubljana, Slovenia; Postdoctoral Fellow, University of Florida, 1997-98; University of California, San Diego, 1998-99.

Professional Experience: Fish & Richardson P.C., Technology Specialist, Patent Practice, 2018-20; RSM, Teacher**,** 2013-18; National Science Foundation, Reviewer, 2012; Thermedical, 2012; Arena Pharmaceuticals, 1999-2009, Senior Scientist, Medicinal Chemistry, 2006-09; Research Scientist, 1999-2006.

Awards and Honors: ChemLuminary Award, ACS President's Award for Local Section Government Affairs, 2010; American Chemical Society Certificate of Achievement, ACS San Diego Section, 2008; Arena Pharmaceuticals Outstanding Medicinal Chemistry Team Award, 2007; Postdoctoral Fellowship, Ministry of Science and Technology, Slovenia, 1997; First Prize Winner, Krka Pharmaceuticals Research Awards, 1996; Graduate Research Scholarship, Ministry of Science and Technology, Slovenia, 1991-96.

Service in ACS National Offices: ACS Council, 2004-Present; Presidential Task Force "Vision 2025", Member, 2012-13; National Award Selection Committee, Member, 2011-13; Committee on Chemistry and Public Affairs, Associate, 2013; Committee on Economic and Professional Affairs (CEPA), Member, 2007-12; Associate, 2005-06; CEPA Liaison to Committee on Minority Affairs, 2008-12; CEPA Liaison to Committee on International Activities, 2011-12; ACS Industry Member Programs, Small/Medium Business Advisory Panel, Member 2009-12; ACS Legislative Action Network, Member, 2006-Present; ACS Legislative Summit on Capitol Hill, 2006; CEPA Task Force on Globalization, 2008-09.

Service in ACS: Member since 1998; ***Northeastern Section (NESACS)***: Councilor, 2020-Present; Nominating Committee, 2020; Alternate Councilor, 2013-19; Chair, Host Local Section Committee for the ACS National Meeting in Boston, 2015; Government Affairs Committee, Member, 2010-Present; STEM Outreach, Science Café and Science Fairs, 2011-Present; *San Diego Section:* Executive Board Member, 2000-12; Councilor, 2004-12; Alternate Councilor, 2000-03; Government Affairs Committee, Chair, 2007-10; ACS California Government and Legislative Affairs Committee, 2008-

Sonja Strah-Pleynet continued on page 8

Chair-Elect Candidate 1

Continued from page 7

Ray Lam

current political climate, I believe high quality science outreach programs such as those offered by NESACS are critical to instill trust in science to the general public. This is why when COVID-19 forced all our in-person events to scale back and move online, I advocated to use our excess funding to sponsor Boston Children's Museum's effort to provide free hands-on STEAM kits for students in Boston public schools. It was a wonderful opportunity to fulfill our purpose as a section, and to introduce NESACS to the local educators and our next generation.

It is a great honor to be nominated for the position of Chair-elect and I am very excited to have the opportunity to serve our section. If elected, I would bring my diverse background, experience as an educator, and an active outreach coordinator to the section. People often question the value of joining ACS or participating in our local section, even though NESACS offers quality programs geared towards all spectrum of chemists, be it industrial or academia. It is my hope that we can nurture and highlight the variety of programs our section has to offer and thereby encourage more members, especially younger chemists, to be actively involved with our section. I am passionate about promotion and representing NESACS. Thank you for your consideration and your support. ◇

Chair-Elect Candidate 2

Continued from page 7

Sonja Strah-Pleynet

10; *ACS Western Regional Meetings:* Invited speaker, Women Chemist Symposium, 2006; San Diego Host Local Section Volunteer, 2007. *ACS Divisions:* Organic Chemistry; Medicinal Chemistry; Chemistry and the Law; Small Chemical Businesses.

Related activities: American Association for the Advancement of Science; Women in the Enterprise of Science and Technology; Boston Patent Law Association; Author of over 30 publications and presentations; Co-inventor on 21 issued US patents.

Statement: I am honored to be nominated for the position of Chair-Elect to NESACS. As Chair, I would bring my expertise as a scientist in the academia and pharmaceutical industry, a collaborator and a leader with over 20 years of ACS volunteer experience on local, regional, and national level. I look forward to serving NESACS members in this role.

For the past ten years I had a privilege of serving NESACS as a Councilor, an alternate Councilor, and a volunteer to various committees, including Nominations, Government, and Public Relations. I chaired the NESACS Host Local Section Committee for the ACS Fall 2015 National Meeting in Boston. In this role, I had the opportunity to recruit and engage almost fifty NESACS members from academia, industry, and government labs, several of them first time volunteers. Together we helped to make the national meeting another great success, while hosting over 13.000 chemistry professionals and students from around the world. As a member of the Nominations Committee I relied on my professional network and reached out to several candidates for the section leadership positions. As a passionate advocate for STEM education, I participated in various community outreach programs, such as Science Cafees and the Cambridge Science Festival. I shared my chemistry experience with students, teachers, and younger chemists through classroom visits, science fairs, and career development symposia.

Prior to moving to Boston, I served on the Executive Board of the ACS San Diego section for ten years. As elected Councilor, I represented the local section on the National Council, and also served on the national Committee on Economic and Professional Affairs, CEPA, which supports ACS members and their professional careers. As the section's Chair of the Government Affairs Committee, I organized legislative visits and events for members with the goal to engage federal and state officials and advocate on key issues important to ACS members, such as funding for STEM education and research, innovation, green chemistry, and sustainability. In this role, I developed strategic partnerships and fostered collaborations between industry, academia and government, ACS and other scientific organizations, providing forums for local section members to learn about and discuss public policy issues effecting chemistry profession. These successful collaborative efforts received national recognition, and won ChemLuminary Award, the ACS President's Award for Local Section Government Affairs. I was honored to accept the award at the 2010 ACS National Meeting in Boston, which also provided an opportunity to begin my involvement with NESACS and I have been an active member ever since.

If elected as Chair, I will continue to support NESACS programming that promote chemistry related cutting edge science, provide opportunities to exchange ideas and foster collaboration among our diverse membership of academic and industrial professionals, and students. I will look for the ways to enhance NESACS sponsored events and careers networking opportunities by fostering partnerships with technical divisions, committees, other local sections and professional organizations, for example, Division of Small Chemical Businesses, Younger Chemist and Women Chemist Committees. I expect that changes caused by COVID-19 pandemic will still influence the way we work, learn, and communicate for years to come. I am proud that NESACS has successfully transitioned to conducting meetings virtually. Moving forward, I would encourage NESACS leaders to explore other innovative ways to improve communication with our members, like social media and digital platforms, to enhance engagement and participation at our events, education programs, and STEM outreach activities in broader scientific community - promoting ACS core values of diversity, inclusion, and respect. Thank you for your consideration and support! ◇

NESACS Candidates for Election

Chair
Ray Lam
Sonja Strah-Pleynet

Secretary
Michael Singer

Treasurer
Ashis Saha

Trustee
Chris Moreton
Pam Mabrouk
Ruth Tanner

Director at Large
Sonja Strah-Pleynet
Ray Lam
Mike Filosa

Esselen Award Committee
Penny Beuning
Kap-Sun Yeung
Prakash Rai
John Macor

Richards Medal Committee
Sylvia Ceyer
Andrew Scholte
Malika Jeffries-El
Michael Pollastri

Councilor/Alternate
Brian D'Amico
Lipin Ji
Meredith Ward
Zemen Berhe
Ruth Tanner
Mort Hoffman
Ken Mattes
Ali Banijamali
Raj Rajur
Ray Lam
Daljit Matharu
Andrew Scholte
Ashis Saha
Yun Ding
Karen Allen
Elizabeth Draganova

Petition Candidates: "Any group comprising two per cent or more of the Northeastern Section may nominate candidates…." See the NESACS website for details. ◇

NESACS Election

Election of Candidates

In the interest of providing maximum information and expression of opinion by the candidates for election in 2021, the Nominating Committee has prepared this section of the NUCLEUS to help broadly disseminate the information about each candidate. The included statements will also be available for review with the electronic ballot. All candidates were asked to submit biographical material and position statements. To attain uniformity of format, the biographical data have been rearranged in some cases. The 2021 election will be conducted electronically in conformance with 2020 Bylaws of the Northeastern Section. The order of candidates for each office in the election has been determined by lot. Ordinals have been provided to more easily find a candidate. Comments regarding the election may be addressed to the Nominating Committee Chair, Dr. Anna Sromek. The deadline for the election will be May 31, 2021. ◇

Secretary

Michael Singer

Education: B.S., State University of New York at Stony Brook (1986), M.S., Brandeis University (1988), Ph.D., Brandeis University (1993)

Professional Experience: Post-Doctoral Research Associate, Organix Inc. 1991-1994; Senior Scientist, ArQule Inc. 1994-1996; Group Leader, Automated Combinatorial Synthesis, ArQule Inc. 1996-2001; Group Leader, Drug Discovery Research and Development, MilliporeSigma (formerly Sigma-Aldrich) MA 2001-2007; R&D Manager, MiliporeSigma, MA 2008-present

NESACS Service: Councilor-NESACS 1996-2001, 2005-2019. 2021 Alternate Councilor – NESACS 2002-2004, 2020 Board of Directors NESACS 1993-present, Secretary-NESACS 1998-present, Medicinal Chemistry Group (MCG) 1991-2001, MCG Treasurer (1992-1993), Program Chair (1994) Chair (1995-1996)

ACS Service: ACS Joint Board-Council Committee on Chemical Abstracts Service, Associate member 2004, Member 2005-2007; Local Section Activities Committee Associate Member 2007, Member 2008 – 2013; Meetings and Expositions Committee Associate Member 2014 Member 2015-2019

Professional Recognition: ACS Fellow – 2015, Henry Hill Award – 2008

Statement for Secretary: This past year has been most challenging for our Northeastern Section. COVID-19 and Safety protocols has driven the leadership of NESACS to discover new ways to reach out and connect with the membership. During my tenure as Secretary for the NESACS, I have worked consistently to increase the quality of communication within the section. There has been an increase in section related electronic communications as the way to stay connected. The Secretary's office will continue the efforts to keep the NESACS Executive Committee, Board members, Councilors, Committee members and most importantly the nearly 6000 members of NESACS virtually connected. Activities of the NESACS Board via meeting minutes, announcements and activities are now promptly posted on our section website (www.nesacs.org) enabling our NESACS members to be up to date on all section activity. I continue to work closely with the NESACS Administrative Coordinator to ensure communication within the section using the Constant Contact platform.

As with any volunteer organization, the organization is only as strong as the membership and those volunteer members that actively participate in the planning and execution of the various events. The strength of the NESACS lies in its membership. For the membership to be strong, communication is critical. With your support for another term as Secretary for the NESACS I will strive to increase the flow of communication between all facets of our section membership.

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Candidate Statements

Continued from page 9

Trustee

Trustee Candidate 1

R. Christian (Chris) Moreton

Education: Nottingham, UK, B.Pharm, 1971, Strathclyde, UK, MSc, 1987, Wales – Cardiff, UK, PhD, 1992.

Professional Experience: Torbay Hospital, Torquay, UK, 1971-2, Harker Stagg, London, UK, 1972-3, Pfizer, Sandwich, UK, 1973-80, Sterling Winthrop, Alnwick, UK, 1981-4, ACO Läkemedel, Solna, Sweden, 1984-6, Penwest Pharmaceuticals, Reigate, UK and Patterson, NY, 1992-2001, Genpharm, Toronto, ON, 2001-2, Idenix Pharmaceuticals, Cambridge, MA, 2002-7, FinnBrit Consulting, Waltham, MA, 2007-Present.

ACS Service: None.

NESACS Service: Government Affairs Committee (2009 – Present). Alternate Councilor (2014 – 2015; appointed to fill a vacancy). Norris Award Committee (2016 – 2020).

Relevant Memberships: American Association for the Advancement of Science, American Association of Pharmaceutical Scientists, Parenteral Drug Association, International Society of Pharmaceutical Engineers, Royal Pharmaceutical Society of Great Britain, Royal Society of Chemistry. *ACS Divisions:* Analytical Chemistry, Colloid & Surface Chemistry, Polymeric Materials Science & Engineering, United States Pharmacopeia Expert Volunteer

Honors: United States Pharmacopeia Jacob P Bigelow Award for Outstanding Contributions to the Standards by a USP Expert Volunteer, 2019.

Position Statement: I am honored to be standing as a first-term candidate for the ACS Northeastern Section Board of Trustees. The Covid pandemic has placed great strains on society at large and has increased pressure on the American Chemical Society and the Northeast Section, and many other scientific organizations. It is important that the Northeast section continues to exercise good financial stewardship of our funds so that we can continue to recognize outstanding chemists in the years to come. During my industrial career, I worked in the pharmaceutical industry, ultimately at senior level, managing budgets and development programs. If elected, I would use my experience to help manage the Northeast Section funds to ensure the continuing recognition of outstanding chemists, both locally and nationally.

Trustee Candidate 2

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); Associate Dean of Academic & Faculty Affairs for the College of Science, Northeastern University (2011-2015); Professor, Northeastern University (2004-present)

ACS Service: Member since 1988. Associate member of ACS SEED National Committee (2003 – 2004); Councilor (2004-2012); Associate Member of Women Chemists Committee (2006-2009); Associate member of Meetings & Expositions (2009-2010); Associate Member of SOCED (2011-2014); Member, Special Joint Committee revising ACS Academic Professional Guidelines (2012-2014); Chair of ANYL Education Committee (2008 – 2013); Member, ACS National Award Committee (2009-2012); Chair, ACS National Award Committee (2013); Member, ACS ChemLuminary Award Committee (2013-2014); Associate member of ETHX Committee (2015-2016); Member of ACS Division of Chemical Education (CHED) Regional Meetings Committee (2016-2018); Member of ETHX Committee (2017-present)

NESACS Service: ACS SEED Coordinator for NESACS (1998-2010); Member of the Theodore William Richards ACS Medal Award Committee (1999 – 2005; 2010-2014); Member of James Flack Norris Award Committee (2013-2016; 2020-2022); Chair of James Flack Norris Award Committee (2015); Chair of Theodore William Richards ACS Medal Award Committee (2000 – 2004; 2011-2012); Chair-Elect (2005); Chair (2006); Past-Chair (2007); Councilor (2004-present)

Memberships, Honors: NSF CAREER Award (1996-2001); CASE Massachusetts Professor of the Year (2003); Northeastern University Excellence in Teaching Award (2004); Fellow of the American Chemical Society (2011); APPE; Sigma Xi; NSTA; NARST; CUR

Trustee Statement: I welcome the opportunity to step up and serve you as a NESAC Trustee. I deeply appreciate the myriad opportunities you have afforded me to serve you in the past and currently. I hope that you feel you have benefited by my service and that you will allow me to serve you in this new and deeper way.

Trustee Candidate 3

Ruth Tanner

Education: B.S. Purdue University, PhD (Organic Chemistry) University of Cincinnati; Research Fellow, Duke University (C. R. Hauser).

Professional Experience: Massachusetts State College at Lowell, Chair, Chemistry Department, Associate Professor; University of Massachusetts Lowell, Professor; President of the University Faculty; Visiting Scientist, Food Engineering and Biomaterials laboratory. MIT; Director of Women in Science and Engineering (WISE); Research interests include Physical Organic Chemistry and Chemistry of Food Materials; Currently, Professor Emeritus, University of Massachusetts Lowell.

ACS Service: Membership Affairs, MAC; Committee on Economic and Professional Development, CEPA;

Liaison to the Advisory Board for the establishment of the ACS American Association of Chemistry Teachers (AACT).

NESACS Service: NESACS Member,1997– present; NESACS Chair; Bylaws Committee; Member of the NESACS Board of Directors; Steering Committee for the Student Exchange Program to Germany NESACS-JCF/CDCh; Trustee & Chair, Board of Trustees; Chair, Education Committee; Chair, Connections to Chemistry program; Co-Chair, High School/College Interface Symposium; By-Laws Committee; On-Site Coordinator, ACS TV Satellite Seminar Series.

Relevant Memberships: Food Chemistry Representative on the Joint Council on Food and Agricultural Sciences of USDA; New England Association of Chemistry Teachers, NEACT; American Association for the Advancement of Science, AAAS; AAUP; American Association of Chemistry Teachers, AACT; ACS Divisions: Organic Chemistry; Chemical Education.

Honors: Department of Chemistry Teaching Award; Council on Diversity and Pluralism Award; Boston Club Advancement Award for the Women in Science and Engineering (WISE) Program; Henry A. Hill Memorial Award for Outstanding Service to NESACS, the ACS, and the Profession of Chemistry; Timm Award for contributions to Chemical Education, NEACT.

Statement: The Trustees of NESACS are responsible for the management and growth of the Trust Funds of the Section. They make recommendations to the Board as to the uses of the Funds, in keeping with the wishes of the donors of the funds. Asset management involves the preservation and growth of funds by appropriate investments. The funding for the Sections' programs, meetings, awards and activities comes from membership dues, contributions, sponsorships and support from the parent ACS. In addition, the income from the Trust Funds provides funding for specific awards and activities in keeping with their designated objectives. As Trustees, with the advice of our financial investment managers, we need to be progressive, with caution, in seeking opportunities for growth with minimum to moderate risk.

Director-at-Large

Director-at-Large Candidate 1

Sonja Strah-Pleynet

Education: Ph.D. Organic Chemistry, 1996; M.S. Organic Chemistry, 1993; B.S. Chemistry, 1990, University of Ljubljana, Slovenia; Postdoctoral Fellow, University of Florida, 1997-98; University of California, San Diego, 1998-99.

Professional Experience: Fish & Richardson P.C., Technology Specialist, Patent Practice, 2018-20; RSM, Teacher**,** 2013-18; National Science Foundation, Reviewer, 2012; Thermedical, 2012; Arena Pharmaceuticals, 1999-2009, Senior Scientist, Medicinal Chemistry, 2006-09; Research Scientist, 1999-2006.

Awards and Honors: ChemLuminary Award, ACS President's Award for Local Section Government Affairs, 2010; American Chemical Society Certificate of Achievement, ACS San Diego Section, 2008; Arena Pharmaceuticals Outstanding Medicinal Chemistry Team Award, 2007; Postdoctoral Fellowship, Ministry of Science and Technology, Slovenia, 1997; First Prize Winner, Krka Pharmaceuticals Research Awards, 1996; Graduate Research Scholarship, Ministry of Science and Technology, Slovenia, 1991-96.

Service in ACS National Offices: ACS Council, 2004-Present; Presidential Task Force "Vision 2025", Member, 2012-13; National Award Selection Committee, Member, 2011-13; Committee on Chemistry and Public Affairs, Associate, 2013; Committee on Economic and Professional Affairs (CEPA), Member, 2007-12; Associate, 2005-06; CEPA Liaison to Committee on Minority Affairs, 2008-12; CEPA Liaison to Committee on International Activities, 2011-12; ACS Industry Member Programs, Small/Medium Business Advisory Panel, Member 2009-12; ACS Legislative Action Network, Member, 2006-Present; ACS Legislative Summit on Capitol Hill, 2006; CEPA Task Force on Globalization, 2008-09.

Service in ACS: Member since 1998; ***Northeastern Section (NESACS)***: Councilor, 2020-Present; Nominating Committee, 2020; Alternate Councilor, 2013-19; Chair, Host Local Section Committee for the ACS National Meeting in Boston, 2015; Government Affairs Committee, Member, 2010-Present; STEM Outreach, Science Café and Science Fairs, 2011-Present; *San Diego Section:* Executive Board Member, 2000-12; Councilor, 2004-12; Alternate Councilor, 2000-03; Government Affairs Committee, Chair, 2007-10; ACS California Government and Legislative Affairs Committee, 2008-10; *ACS Western Regional Meetings:* Invited speaker, Women Chemist Symposium, 2006; San Diego Host Local Section Volunteer, 2007. *ACS Divisions:* Organic Chemistry; Medicinal Chemistry; Chemistry and the Law; Small Chemical Businesses.

Related activities: American Association for the Advancement of Science; Women in the Enterprise of Science and Technology; Boston Patent Law Association; Author of over 30 publications and presentations; Co-inventor on 21 issued US patents.

Statement: Please see above statement for Chair-Elect.

Director-at-Large Candidate 2

Ray Lam

Education: M.Sc. Chemistry with Industrial Experience, University of Bristol, UK (2004); Ph.D. Inorganic and Materials Chemistry, University of Bristol, UK (2008)

Professional Experience: Associate Professor, Massachusetts Maritime Academy (2013–Present); Chapter Director, Massachusetts State College Association (2020–Present); Adjunct Faculty, Emanual College, MCPHS University (2012–2013), Providence College (2011–2012); Postdoctoral Research Associate, University of Pittsburgh (2008–2010)

NESACS Service: Chair, National Chemistry Week (2016–

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Candidate Statements

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Present); Alternate Councilor (2021–Present)

Honors: ACS Local Section 2020 Outreach Volunteers of the Year

Statement: It is a great honor to be nominated for the position of Director at Large and I am very excited to have the opportunity to serve our section. During my tenure as Chair for National Chemistry Week, I have experienced first-hand the power and importance of outreach programs. If elected, I would like to nurture and promote the variety of programs our section has to offer and thereby encourage more members, especially younger chemists, to be actively involved with our section. I would also like to be more involved with other NESACS committees to gain a deeper understand of our section and contribute new ideas. I would bring my diverse background, experience as an educator, and an active outreach coordinator to the section. Thank you for your consideration and your support.

Director-at-Large Candidate 3

Michael P. Filosa

Education: B. Sc., Massachusetts Institute of Technology (1974), Ph.D., Harvard University, (1980), Babson School of Executive Education (1988).

Honors: Phi Beta Kappa, Phi Lambda Upsilon, Merck Award (1974), Dreyfus Foundation Scholar (1975). NESACS Henry A. Hill Award (2012).

Experience: Polaroid Corporation (1979-2005); Scientist, Group Leader, Senior Manager of Chemistry; ZINK Imaging, Inc.; Senior Manager of Chemistry (2005-2013); Performance Indicator, LLC. Chemistry Manager (2014-2019, Bambu Global, LLC (2019-Present).

NESACS and ACS Service: ACS Member since 1976. Alternate Councilor (1997-1999; 2005-2008), Councilor (2009-2020); Director-at-Large (2017-2019); Editor of the Nucleus (2005-2020). Board of Publications (2005-Present), Heyn Award Committee (2006-Present). Nominating Committee (2010, 2013, 2016, 2019). Local Organizing Committee for the 2007, 2010, 2013 Boston ACS National Meetings. Committee on Chemical Abstracts Service (CCAS), Associate Member (2010), Full Committee Member (2011-19). Local Section Activities Committee (LSAC), Associated Member (2020).

Statement: After serving as Nucleus editor for 16 years and councilor and alternate councilor for 18 years, I would like to continue to serve NESACS as a Member of the Board. I would greatly appreciate your vote. Thank you in advance!

Gustavus John Esselen Award Committee

Esselen Candidate 1

Penny Beuning

Education: B.A. Chemistry, Macalester College (1994), Ph.D. Chemistry, University of Minnesota (2000)

Professional Experience: Professor and Chair, Chemistry and Chemical Biology, Northeastern University (2020-present); Professor (2018-present), Associate Professor (2012-2018), Assistant Professor (2006-2012), Chemistry and Chemical Biology, Northeastern University; Postdoctoral Fellow, Biology, MIT, (2001-2006); Postdoc, Chemistry, University of Minnesota (2000-2001)

ACS Service: Councilor, representing Chemical Toxicology (TOXI, 2015-present); Committee on Economic and Professional Affairs (2018-present); CPT Student Skills subcommittee (2018-2020); CPT Global Activities Subcommittee (2019); Task Force on Leadership and Professional Development (2020-present); Postdoc to Faculty Workshop (2012, 2015, 2017); Facilitator at the Cottrell Scholars Collaborative-ACS New Faculty Workshop (2013-2020); Organizing committee and facilitator, COMPASS Career and Occupational Mentoring for the Professional Advancement of Science Students, American Chemical Society, American Physical Society, and Cottrell Scholar Collaborative (April 25-27, 2019); Project SEED NU coordinator and mentor (2018, 2019); Chemical Research in Toxicology Editorial Advisory Board (2019-2021); ACS TOXI division Executive Committee (2015-present); TOXI Program Committee (2018-2019); TOXI Program Chair (2020-2021); Chemical Research in Toxicology Young Investigator Award Selection Committee (2019, 2020, 2021)

NESACS Service Awards: Committee and Judge, NSCRC (2010, 2011, 2012, 2014); presented "Ethics in Publishing" presentation, Northeastern Student Chemistry Career Symposium (April 19, 2015); Organized ChemIDP workshop with NSYCC (July 24, 2019)

Relevant Memberships: AAAS, Protein Society, Biophysical Society, ASBMB, AWIS, GWIS

Honors: Damon Runyon Cancer Research Foundation Postdoctoral Fellowship (2001); Camille and Henry Dreyfus Foundation New Faculty Award (2006); Cottrell Scholar (2009); CAREER Award, National Science Foundation (2009); American Chemical Society WCC Lectureship (2011); American Cancer Society Research Scholar Award (2012); Chemical Research in Toxicology Young Investigator Award (2015); Fellow, American Chemical Society (2020)

Esselen Candidate 2

Kap-Sun Yeung

Education: B.Sc. (1st Class Honors), The Chinese University of Hong Kong, 1990; Ph.D. University of Cambridge, UK, 1994; Postdoctoral Fellow, Scripps Research Institute, La Jolla, CA, 1995-1996.

Professional Experience: Discovery Chemistry, Bristol Myers Squibb, Cambridge, MA: current position: Scientific Associate Director

ACS Service: Committee on International Activities (Member 2019-2021; Associate Member 2016-2018), IAC Stopover Grant Update Task Force (Member 2020), IAC Strategic Plan 3.2 Task Force (Member 2020), The first Asia Pacific International Chapters Conference, Scientific Program Committee (Member 2016-2017); ACS Northeast Regional Meeting (NERM 2013), New Haven, CT (Program Co-Chair, Organizing Committee 2011-2013); New Haven Local Section, Councilor, Board Member (2016-2018), Alternate Councilor, Board Member (2015), Bylaws Update Chair (2016-2018). Organizer/co-organizer for fifteen MEDI Division sessions at ACS National Meetings, including two MEDI-sponsored sessions at EFMC (Germany) and AFMC (South Korea) symposiums (2009 to present).

NESACS Service: Alternate Councilor (2020-2022); NESACS Medicinal Chemistry Committee (Member); Organizing Committee Chair, NESACS Medicinal Chemistry Symposium at BMS Cambridge (2019, 2020).

Statement: I have strong track record of scientific publications (research articles, reviews and book chapters) and presentations, and long involvement in academic-industry collaboration with publications in *J. Am. Chem. Soc.*, *Angew. Chem. Int. Ed.* and *Nature*. I serve as reviewer of manuscripts for various chemistry journals. I also have immense experience in organizing chemistry symposia and sessions of specific topics. In addition to the multiple chemistry disciplines related to my drug discovery profession, I am also interested in many other chemistry areas because of my previous research experience. I have the scientific background and knowledge to identify candidates who deserve the recognition of the Esselen Award. I appreciate your votes for the opportunity to serve on the Award Committee.

Esselen Candidate 3

Prakash Rai

No Statement Received

Esselen Candidate 4

John Macor

Education: BS, 1982, University of Notre Dame; PhD (Organic Chemistry), 1986, Princeton University (Prof. E.C. Taylor)

Professional Experience: Pfizer (1986-1994), co-inventor of Relpax®; Astra Arcus (1994-1997); Bristol-Myers Squibb, co-inventor of sparsentan, zavegepant and Nurtec ODT® (1997-2016); Sanofi (2016-present), presently Global Head Integrated Drug Discovery

ACS Service: Editor-in-Chief, Annual Reports in Medicinal Chemistry (2007-2011); MEDI Vice Chair (2012); MEDI Program Chair (2013-2014), MEDI Chair (2015), MEDI Past Chair (2016)

NESACS Service: Speaker, 2016 5th Annual Advances in Chemical Sciences; 2018-2020 Esselen Committee

Relevant Memberships – ACS Member (1986-present); NESACS Member (2016-present); ISCH (2015-present); AAAS (2019-present)

Honors: 2009 Scaborough Award (MEDI ACS); 2011 ACS Fellow; 2014 Alfred Burger Award (ACS); 2014 MEDI Hall of Fame; 2019 Smissman Award (MEDI ACS); 2020 IUPAC Richter Prize; 2002 Chair GRC on Medicinal Chemistry; 2006 Chair GRC on Heterocyclic Compound

Theodore William Richards Medal Committee

Richard Medal Committee Candidate 1

Sylvia T. Ceyer

Biographical Sketch: Sylvia T. Ceyer is the J. C. Sheehan Professor of Chemistry at the Massachusetts Institute of Technology. She received her Ph.D. from the University of California at Berkeley, and completed a postdoctoral appointment at the National Bureau of Standards.

Ceyer's research interests center on experimental molecular dynamics on material surfaces that serve either as catalysts, as templates for nanosystems, or as devices.

Ceyer is a former Head and Associate Head of the MIT Department of Chemistry. She previously held the first W. M. Keck Foundation Professorship in Energy and the Class of 1943 Career Development Chair. She is a fellow of the National Academy of Sciences (NAS), American Academy of Arts and Sciences, American Association for the Advancement of Science, and the American Physical Society. Her numerous honors include the Gibbs Medal of the American Chemical Society (ACS), ACS Nobel Laureate Signature Award, Hope College Distinguished Alumni Award, Edgerton Prize, Association of University Women's Young Scholar Award, Sloan Fellowship, Smith Award for Meaningful Contributions to Undergraduate Student Life and Learning, MacVicar Faculty Fellow, School of Science Teaching Prize, Baker Memorial Award for Excellence in Undergraduate Teaching, and the Dreyfus Teacher-Scholar Award. She has held many named lectureships including the ACS Langmuir Lecturer and a Welch Foundation Lectureship.

She has served on the NAS council, as chair of its Physical and Mathematical Sciences Class and its Chemistry Section. She also has served as chair of the Ford Foundation Fellowships Panel on Physical Sciences and Mathematics, on the Basic Energy Sciences Advisory Committee for the Department of Energy, as associate editor of Physical Review Letters, as organizer of numerous ACS national symposia, on editor-in-chief search committees for the Journal of the American Chemical Society and Journal of Physical Chemistry, on editorial boards of the Journal of Physical Chemistry and Langmuir, and on the ACS Division of Physical Chemistry Executive Committee.

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Candidate Statements

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Richard Medal Committee Candidate 2

Andrew Scholte

Education: B. Sc. (Biochemistry; 1st Class Honors) Simon Fraser University, 2000; Ph.D. (Chemistry) University of Alberta, 2006; Postdoctoral, Boston College, 2006-2008.

Professional Experience: Sanofi, Integrated Drug Discovery, Principal Scientist and Lab Head, 2018-present; Sanofi Genzyme, Integrated Drug Discovery, Senior Scientist, 2016-2018; Sanofi, a Sanofi Company, Medicinal Chemistry Department, Staff Scientist II, 2012-2016; Genzyme, Medicinal Chemistry Department, Staff Scientist I, 2008-2012; Boston College, Chemistry Department, NSERC Postdoctoral fellow with Prof. Marc Snapper, 2006-2008.

Honors/Awards: ACS Leadership Development Award (2010); Natural Sciences and Engineering Research Council of Canada (NSERC) PDF (2006-2008); Outstanding Oral Presentation-Canadian Society for Chemistry (2005); Canada Graduate Scholarship (2003-2005); NSERC Postgraduate Scholarship A (2001-2003); Alberta Heritage Studentship (2000-2005); Faculty of Science Graduate Entrance Scholarship (2000); Department of Chemistry Entrance Scholarship (2000); Walter H. John Scholarship (2001-2005); Mary Louise Imrie Graduate Student Award (2004); Alfred Bader Scholarship-Canadian Society for Chemistry (2000).

Service to the Chemistry Community (USA and Canada): Member of the ACS since 2006; President of the 1st Banff Symposium on Organic Chemistry Organizing Committee; Member of the Canadian Institute of Chemistry since 2000. Member of the Long Range Planning Committee, Division of Medicinal Chemistry – ACS, 2020-present.

NESACS Service: Chair (2019); Councilor (2018-present); Alternate Councilor (2012-2017), Program Chair, Northeast Regional Meeting (NERM) 2021; Member of the Nominating Committee (2015, 2020); Member of the German Exchange Program (2014-present); Member of the German Exchange (GEX) steering committee (2013-present); Member of the Medicinal Chemistry Committee (2012-present) Vice Chair of the NSYCC (2010-2011). Member on the NESACS committee for the 2010 ACS meeting in Boston, MA (Katherine Lee-Chair).

Personal Statement: Being elected to the Theodore Williams Richards Medal Committee would be an honor. It is one of the most prestigious awards given out by NESACS, if not throughout the whole American Chemical Society. If elected, I would strive to keep the high standard and tradition of this award.

Richard Medal Committee Candidate 3

Malika Jeffries-El

Malika Jeffries-EL is the Associate Dean for the Graduate School in Arts and Sciences at Boston University. She is also an Associate Professor with appointments in Chemistry and Materials Science and Engineering.

Education: B.A. Chem, Wellesley College; Ph. D., The George Washington University; Postdoctoral Fellow, Carnegie Mellon University with R.D. McCullough

Professional Experience: Associate Dean for the Graduate School in Arts and Sciences Boston University, 2020 – present; Associate Professor, Department of Chemistry and Division of Materials Science and Engineering, Boston University, 2016 – present; Martin Luther King Jr. Visiting Professor MIT 2015; Associate Professor of Chemistry, Iowa State University, 2012 – 2016; Assistant Professor of Chemistry, Iowa State University, 2005 – 2012.

ACS Service: Member Joint Board-Council Committee on Publications (JBCCP); 2020 – Associate, Women Chemistry Committee 2019¬ – 2020; Division of Organic Chemistry Alternate Councilor 2017 – 2018; Division of Organic Chemistry Member-at-large 2014 – 2017; Program Chair, Division of Polymer Chemistry 2014 – 2016; Councilor – Ames Local Section 2011 – 2015; Editorial Advisory Board, Macromolecules, 2012 – 2014; advisory board for the ACS Women Chemist of Color Initiative 2010 – present; Editorial Advisory Board, Chemical and Engineering News, 2010 – 2012; ACS Society Committee on Education (SocEd) 2009 – 2014; ACS Younger Chemist Committee (YCC) 2002 – 2009.

NESACS Services: Councilor 2019 –; ACS Fellows canvassing committee 2019 –

Relevant Memberships: Member Royal Society of Chemistry; Associate Editor, Journal of Materials Chemistry C, 2013 – present.

Honors: ACS Fellow, Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences 2015; Iota Sigma Pi Agnes Fay Morgan Award 2014; ACS Women Chemist Committee Rising Star award 2012; the Lloyd Ferguson Award from the National Organization of Black Chemist and Chemical Engineers 2009; NSF CAREER award 2009; 3M untenured faculty award 2008.

Research interests: organic synthesis and organic electronics.

Personal statement: Prior to moving to Boston, I have had a solid track record of service to the ACS at the National and local level. I believe that my previous experience has prepared me to be of service to the Northeastern Section in many ways. I am a former member of the Women's Chemist Committee and would like to help develop local activities for the professional development of our female members. As your councilor, I will work to protect the interest of NESACS and increase the prominence and visibility of its members. I have previously served on canvassing and selection committees for ACS national awards and thus think that I can be helpful in that regard. I have also been a staunch supporter of diversity and if elected, I will work hard to encourage participation of people from underrepresented groups in our chapters programs and also develop new ones targeting younger members.

Richard Medal Committee Candidate 4

Michael Pollastri

Biographical Sketch: Dr. Michael Pollastri, Professor of Chemistry and Chemical Biology at Northeastern University is presently serving as the Senior Vice Provost for Portland, where he leads academic and research operations at the Roux Institute in Portland, Maine. Mike worked at Pfizer in hit-to-lead and lead optimization medicinal chemistry for nearly ten years. In 2007 he accepted a research faculty position in the Boston University Department of Chemistry, where he led the establishment of the Center for Molecular Discovery, a collaborative University resource that encompassed a combination of high-throughput screening and medicinal chemistry optimization capabilities. In 2009, he joined the faculty in the Department of Chemistry and Chemical Biology at Northeastern University, where he was appointed department chair in 2015 and rose to the rank of full professor in 2017. He was appointed Interim Dean of the College of Science in March 2019 and assumed his present role in Portland in June 2020. His research is focused on discovery of new therapeutics for neglected tropical diseases. Dr. Pollastri earned his bachelor's degree from the College of the Holy Cross, a master's degree from Duke University, and his doctorate from a graduate program he developed in partnership between Pfizer and the Brown University Department of Chemistry. A member of the American Chemical Society since 1994, he served as an Executive Board Member of the Connecticut Valley Section of the ACS (1999-2003), served on the NESACS Advances in Chemical Sciences Symposium Organizing Committee (2009-2010), and presently serves on the ACS National Award Selection Committee (2021-2023).

Councilor/Alternate Councilor

Councilor/Alternate Councilor Candidate 1

Brian D'Amico

Education: B.S. Chemistry, Northeastern University (2015)

Professional Experience: Senior Laboratory Technician, Department of Chemistry & Chemical Biology, Northeastern University (2019-Present); Laboratory Technician, Department of Chemistry & Chemical Biology, Northeastern University (2014-2019); Chemistry Supervisor & Teaching Assistant, Department of Chemistry & Chemical Biology, Northeastern University (2013-2014); CMC Co-op, Idenix Pharmaceuticals (2013); Post Selection Chemistry Co-op, GlaxoSmithKline (2012)

Memberships – American Chemical Society (2010-Present); Boy Scouts of America (Youth Member: 1997-2009, Adult Leader 2009-Present)

ACS & NESACS Service: Executive Board Member, Northeastern Section Younger Chemists Committee (2015-Present); Chair, Northeastern Section Membership Committee (2016-Present); Member, Northeastern Section Bylaws Committee (2017-Present); Member, Northeastern Section Nominating Committee (2020); Member, Northeastern Section Government Affairs Committee (2016-Present); Northeast Student Chemistry Research Conference Organizing Committee (2015, 2016, 2017, 2018, 2019); Logistics Chair , 2021 Northeast Regional Meeting (Meeting Cancelled); Member, NESACS Board of Publications (2020-Present); Photographer for *The Nucleus* (2018-Present)

Personal Statement: I am honored to have been considered for the position of Councilor in NESACS. Over the last seven years, starting late in my undergraduate studies, have become increasingly involved in many of the great events, activities and governance in our local ACS section. Over these years, I have served on a broad range of NESACS committees and experienced a range of responsibilities, from membership engagement to event planning and logistics, to publicity, to internal governance matters including serving on the Bylaws Committee throughout the last major overhaul of the bylaws that govern our local section. Through all these activities that I have been involved within NESACS, I have collaborated with many great members in NESACS and plan to continue to serve with and for all of you for many years to come.

If elected to serve as a Councilor representing NESACS in the national ACS Council, I would draw upon the perspective I have and continue to gain from my involvement in NESACS. My goal in serving as Councilor is to ensure that the collective voice of the members of our local ACS section is heard and represented fully in the Society. I look forward to taking on this responsibility for the benefit of all NESACS members.

Councilor/Alternate Councilor Candidate 2

Lipin Ji

Education: 2013, B.E. Pharmaceutical Engineering, East China University of Science and Technology, China; 2015, M.S. Medicinal Chemistry, Northeastern University; 2021, Ph.D. Medicinal Chemistry, Northeastern University.

Professional Experience: 2021-present, Senior Chemist, MAKScientific, Burlington, MA.

ACS Service: 2020-present, career chair of NSYCC; 2018-present, ACS Member.

Honors: International Cannabinoid Research Society Student Travel Award, 2019; Northeastern University PhD Network Travel Award, 2019; Best Poster Presentation Award, Northeastern University, 2018; The Excellent Graduation Thesis, ECUST, 2013.

Statement: I have enjoyed all NESACS events in the past several years. In 2020, I began to serve as the career chair of NSYCC and organized several workshops and seminars for young chemists in Northeastern Area. As a councilor of NESACS, I will be the bridge between chemists in the Northeastern area and the national American Chemical Society, delivering the voice of NESACS members to ACS and vice versa. Also, as a recent graduate, I will continue to advocate for young chemists, focusing on both of their personal and professional developments. Thank you for your consideration!

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Candidate Statements

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Councilor/Alternate Councilor Candidate 3

Meredith Ward

Education: B.S., University of Texas at Austin (2016); M.S., University of Massachusetts Boston (2019).

Professional Experience: Associate Chemist, KEA Technologies (2021–present); Chemist, ProVerde Laboratories (2019–2021).

ACS Service: Northeastern Section Younger Chemists Committee executive board member (Secretary 2018–2019, Chair-Elect 2019–2020, Chair 2020–present). Organized symposia for 254th and 256th National ACS meetings. Assisted in organization and execution of ChemLuminary Award-winning event (2016). Northeastern Section Alternate Councilor (interim 2020, 2021–present).

Memberships: American Chemical Society (ACS), American Association for the Advancement of Science (AAAS), National Science Policy Network (NSPN).

ACS Awards: Younger Chemist Leadership Development Award (2020); Green Chemistry Summer School Award (2018).

Personal Statement: I am honored to be considered for the position of Councilor to represent NESACS. This past year has taught me a lot about issues that still arise even when in lockdown, including mental health, politics, and racial justice. NSYCC held events on the former two – a panel on mental health during the pandemic and a workshop series about government affairs – and wrote statements of solidarity when racial injustice caused mass tragedies. I look forward to discussing these and other issues with National ACS, and I would make that a priority if elected Councilor. I have also learned a lot about accessible events, and I plan to continue making all events I organize as accessible as possible, whether virtual or (eventually) in-person. Thank you for your consideration.

Councilor/Alternate Councilor Candidate 4

Zemen Berhe

Education: B.S. Chemistry, University of Stuttgart (Germany, 2016); Ph.D. Chemistry and Chemical Biology, University of Massachusetts Dartmouth (2017 - present)

Professional Experience: University of Massachusetts (Dartmouth) Department of Chemistry, Graduate Teaching Assistant for Physical Chemistry lab I and II (2017-2020); University of Stuttgart (Germany) Department of Sanitary Engineering, Water Quality and Solid Waste Management, Research Scientist (2015-2017)

ACS Service: Northeastern Section Younger Chemists Committee executive board member since 2018: Career Chair 2018–2020, Chair-Elect 2020 – present, Chair beginning June 2021. Invited Research Talk at the 258th National American Chemical Society meeting in San Diego

Memberships: American Chemical Society (ACS), National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE), American Association for the Advancement of Science (AAAS), German Chemical Society (GDCh)

Honors/Awards: Younger Chemist Leadership Development Award, National YCC, American Chemical Society (2021); American Institute of Chemists Student Award, The American Institute of Chemists (2019); Dean's Graduate Support Grant Award, University of Massachusetts Dartmouth (2019); Graduate Teaching Assistantship Award, University of Massachusetts Dartmouth (2019); German Chemical Student Award, German Chemical Society (2012)

Statement: I am thrilled to be considered for the position of Councilor for NESACS. In 2017 I moved to the greater Boston area from Stuttgart, Germany for my PhD studies at UMass and I have been an active NSYCC/NESACS/ACS member ever since. I embrace being part of NSYCC as the current Chair-Elect in which I had the opportunity to plan research, career, and social events including the annual Northeast Student Chemistry Research Conference (NSCRC) and the annual Career Symposium for younger chemists in the greater Boston area. Starting in June 2021 I will be new NSYCC Chair.

I am looking forward to getting more involved in NESACS after being involved in NSYCC since the beginning of my PhD tenure. I am interested in discussing the goals, interests, and concerns of NESACS with the national ACS representatives, especially regarding science policy and youth engagement. Furthermore, as a black chemist I also am very interested in promoting Diversity, Inclusion and Equity within NESACS through collaboration with the national ACS as well through international ACS chapters.

Thank you for your time and support.

Councilor/Alternate Councilor Candidate 5

Ruth Tanner

Education: B.S. Purdue University, PhD (Organic Chemistry) University of Cincinnati; Research Fellow, Duke University (C. R. Hauser).

Professional Experience: Massachusetts State College at Lowell, Chair, Chemistry Department, Associate Professor; University of Massachusetts Lowell, Professor; President of the University Faculty; Visiting Scientist, Food Engineering and Biomaterials laboratory. MIT; Director of Women in Science and Engineering (WISE); Research interests include Physical Organic Chemistry and Chemistry of Food Materials; Currently, Professor Emeritus, University of Massachusetts Lowell.

ACS Service: Membership Affairs, MAC; Committee on Economic and Professional Development, CEPA;

Liaison to the Advisory Board for the establishment of the ACS American Association of Chemistry Teachers (AACT).

NESACS Service: NESACS Member,1997– present; NE-

SACS Chair; Bylaws Committee; Member of the NESACS Board of Directors; Steering Committee for the Student Exchange Program to Germany NESACS-JCF/CDCh; Trustee & Chair, Board of Trustees; Chair, Education Committee; Chair, Connections to Chemistry program; Co-Chair, High School/College Interface Symposium; By-Laws Committee; On-Site Coordinator, ACS TV Satellite Seminar Series.

Relevant Memberships: Food Chemistry Representative on the Joint Council on Food and Agricultural Sciences of USDA; New England Association of Chemistry Teachers, NEACT; American Association for the Advancement of Science, AAAS; AAUP; American Association of Chemistry Teachers, AACT; ACS Divisions: Organic Chemistry; Chemical Education.

Honors: Department of Chemistry Teaching Award; Council on Diversity and Pluralism Award; Boston Club Advancement Award for the Women in Science and Engineering (WISE) Program; Henry A. Hill Memorial Award for Outstanding Service to NESACS, the ACS, and the Profession of Chemistry; Timm Award for contributions to Chemical Education, NEACT.

Statement: I am honored to be nominated for the position of Councilor for the Northeastern Section. I have been serving as a Councilor to the ACS Council, and I ask for your vote for re-election for me to continue to be one of the representatives of NESACS on the policy-making body of the Society. The role of Councilor is an important one to the Section. The Councilors represent the Section to the National Council which is the governance body of the Society, and communicate decisions by the Council back to their local sections. Your vote will permit me to continue to be an active voice for the Northeastern Section, and to work for policies that represent the interests of our broad and increasingly diverse membership.

Councilor/Alternate Councilor Candidate 6

Morton Z. Hoffman

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

Professional Experience: Sheffield University, England: Postdoctoral Research Associate (1960-61); Boston University: Assistant Professor (1961-67); Associate Professor (1967-71); Professor (1971-2005); Professor Emeritus (2005-present).

ACS Service: Society Committee on Education (SOCED) Task Force on Undergraduate Programming (1991-2002); College Chemistry Consultants Service (1995-2009); Editorial Advisory Board, ACS General Chemistry Project (1999-2004); SOCED (2002-11); Senior Chemists Task Force (2008-12); Senior Chemists Committee (2013-2014); International Activities Committee (2015-present). Division of Chemical Education (CHED): Program Committee (1992-2004); International Activities Committee (1993-2013); Regional Meetings Committee (2000-09); Chair-Elect, Chair, Immediate Past Chair (2004-06); CHED Representative to IUPAC (2005-14). Malta Conferences on Science and Education in the Middle East: Organizing Committee (2002-present); Malta Conferences Foundation, Treasurer (2011-20).

NESACS Service: Board of Directors (1993-present); Education Committee (1993-present); German Exchange Steering Committee (2001-present); Alternate Councilor (1994-97, 1999-2002, 2018); Councilor (1997-98, 2003-2017, 2019-2021); Chair-Elect, Chair, Immediate Past Chair (2001-03); Associate Editor, Proofreader, and Photographer, *The Nucleus* (2005-present); Norris Award Committee (2007-10); NERM Committee (2007-present); NESACS Representative, Board of Directors, Northeast Region (2010-2018); International Year of Chemistry Committee (2011); Subsection Task Force (2013-2015); Richards Medal Committee (2013-17).

Relevant Memberships: American Association for the Advancement of Science (AAAS); New England Association of Chemistry Teachers (NEACT). ACS Divisions: Inorganic Chemistry; Physical Chemistry; Chemical Education; History of Chemistry; Professional Relations.

Honors: Phi Beta Kappa (1955); National Academy of Sciences Senior Postdoctoral Research Associate (1969-70); Danforth Foundation Associate (1970); AAAS Fellow (1992); Boston University Metcalf Cup and Prize for Excellence in Teaching (1994); NESACS Henry Hill Award for Outstanding Service (1999); American Chemistry Council Responsible Care® Catalyst Award (2002); NEACT John Timm Award (2003); Lehman College Arthur Sweeny, Jr., Memorial Lecturer (2003); U.S. National Representative, IUPAC Committee on Chemistry Education (2004-2014); St. Michael's College Leavy Family Lecturer Award (2005); NESACS James Flack Norris Award (2005); Alumni Association of Hunter College Professional Achievement Award (2006); ACS National Award for Volunteer Service (2007); Western Connecticut ACS Local Section Visiting Scientist Award (2007); ACS Fellow (2009); IUPAC Chemistry Education Award (2014); IUPAC Fellow (2014); Arno Heyn Memorial Book Prize for Distinguished Service to NESACS Publications (2014); Zaida Morales-Martinez Prize for Outstanding Mentoring of ACS Scholars (2018).

Statement: I have served as a Councilor or Alternate to the ACS Council for more than 25 years, and I ask for your vote for re-election in order to permit me to continue as one of the representatives of NESACS on the policy-making body of the Society. I intend to continue to work forcefully on Council and within my committee assignments to create even stronger bonds between the Society and Local Sections/International Chapters, younger chemists, senior chemists, high school teachers, and underrepresented groups. Given my involvement with the NESACS German Exchange, the Malta Conferences, IUPAC, and the ACS International Activities Committee, I pledge to continue to support the expansion of the Society's international presence. I promise to be an active and experienced voice for NESACS, representing the interests of our broad and increasingly diverse membership.

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Candidate Statements

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Councilor/Alternate Councilor Candidate 7

Ken Mattes

Education: University of Wisconsin School of Pharmacy, Madison, WI, 1974-75, Postdoctoral work with Dr. C.R. Hutchinson, Synthesis of indole alkaloids, iridoids, and antitumor agents. Determined the biomimetic mechanism of Camptothecin biosynthesis. Iowa State University, Ames, IA,1972-1974. Ph.D. in Organic Chemistry with Dr. Orville Chapman. Iowa State University, Ames, IA, 1969-1972. MS in Organic Chemistry with Dr. Glenn Russell

University of Illinois at Chicago, Chicago, IL, 1965-1969, BA in Chemistry.

Professional Experience: MattesK_Consulting 2014-present. ASTRAZENECA, Waltham, MA 02451 2000-2014t. ASTRAZENECA, Worcester, MA 01605 1999-2000. ASTRA ARCUS USA, Worcester, MA 01605 1998-1999. Eastman Kodak Company, Rochester, NY 14650 1976-1998.

ACS Service: Northeastern Section, Councilor, 2020 to 2021. Northeastern Section, Alternate Councilor, 2019 to 2020. Northeastern Section, Councilor, 2017 to 2018. Northeastern Section, Alternate Councilor, 2016 to 2018. National ACS, Division Activities Committee (DAC) Appointment, 2015. Northeastern Section, Archivist, 2015 to present. Northeastern Section, Councilor, 2014 to 2015. Northeastern Section, Associate Archivist, 2012 to 2015. Northeastern Section, Alternate Councilor, 2013 to 2015. Northeastern Section, Alternate Councilor, 2010 to 2013. National ACS, Local Section Activities Committee, 1996-1998. Rochester Section Councilor, 1995-1998. Rochester Section: Creator and Chairman Science Saturdays at RMSC (1994-1998). Rochester Section, Past-chairman 1994. Rochester Section, Chairman 1993. Rochester Section, Chairman-elect 1992. Rochester Section, ROCi/ACS Golf Tournament Chairman, 1993-1998. Rochester Section Committees: National Chemistry Week, 1990-1998; Publicity, 1990-91; Long Range Planning, 1992-94; Nominations and Elections, 1993; Harrison Howe, 1993; Professional Relations, 1993-94; Finance, 1994, Minority Affairs, 1997; Rochester Section, Member-at-large (1990-91) ACS Speaker Service: Inside Story of Color Photography (1977-1998), over 100 invited lectures. AICHE Speaker Service: Inside Story of Color Photography (1980-1998), over 20 invited lectures.

ACS Technical Division Memberships: Member of the Medicinal Chemistry Division. Member of the Organic Chemistry Division. Member of the Agrochemical Division. Member of the Chemical Information Division. Member of the Computers in Chemistry Division

Relevant Memberships: Boston Area Group for Informatics and Modeling. American Chemical Society. American Association for the Advancement of Science. International QSAR and Molecular Modeling Society

Honors: Massachusetts Soccer Referee Committee Referee Instructor of the Year, 2008

Rochester Section Award Recipient, 1995

Phoenix Award Winner , ROCi/ACS National Chemistry Week, Malls Chairman, 1990-91

Statement: If elected to this position of councilor for NESACS, I would strive to represent at the national level those issue of most importance to NESACS. I would also strive to support the changes and challenges faced by the American Chemical Society to enhance the information sharing capabilities of ACS, raise the image of chemistry in the community and stress the importance of chemistry to solve the problems of the future. Specific goals would be to support the Local Section Activities Committee programs, build bridges between local section Archives and NESACS community and contribute to the National Chemistry Week program. As scientific and professional problem solvers, members of the ACS need to help improve the educational and professional opportunities afforded by one of the largest professional societies.

Councilor/Alternate Councilor Candidate 8

Ali R. Banijamali

Education: Postdoctoral Studies, Medicinal Chemistry, University of Connecticut (1987). Ph.D. Massachusetts College of Pharmacy & Allied Health Sciences (1985). M.S. Northeastern University (1981). B.S. University of Tehran (1977)

Professional Experience: Principal Scientist, Akebia Therapeutics (2019-present). Principal Investigator, Ironwood Pharmaceuticals (2007-2018). Research Fellow, Uniroyal Chemical/Chemtura Corporation (1987-2006). Adjunct Professor, Northeastern U School of Pharmacy, Center for Drug Discovery (2008-present)

ACS Service: Member (1981-present). Alternate Councilor (1994-2002) and Chair (2002), New Haven Connecticut Section. Selection Committee Member, Kirkwood Award (2002-2008). Volunteer, New Haven Connecticut Science Fair and National Chemistry Week (1995-2006)

Maurice R. Chamberland Award Recipient (2004) given by the New Haven Connecticut Section for research contributions which have produced a proven benefit for humanity. The award recognized my pioneering research in discerning the pathway of metabolism of acetylenic bond in mammalian systems.

Statement: I am honored to be nominated for the position of Councilor for the Northeastern Section of the American Chemical Society. As Councilor, I plan to further the growth and health of NESACS by attending local section board meetings and representing our section at National ACS meetings. I will always cast my vote to ensure that our governing body is working in the best interests of our local section.

My professional experience in the agrochemical and pharmaceutical industries has been focused on the elucidation of the metabolic pathway of agrochemicals and pharmaceuticals in animal models. My research on the application of Carbon-13 labelling and ^{13}C NMR spectroscopy in the metabolism of propargyl alcohol, which is widely utilized as an intermediate

in the synthesis of pesticide chemicals and pharmaceuticals, revealed multiple glutathione additions to the carbon-carbon triple-bond—a concept that had not been reported prior to this work. In addition, I have produced over fifty publications and presentations, including the chapter "Drugs Used to Treat Thyroid Disorders" in *Foye's Principles of Medicinal Chemistry*, an internationally recognized textbook used in schools of pharmacy throughout the United States.

My unique perspective will be invaluable in working with chemists from diverse backgrounds, and I hope to advocate for younger chemists and engage them in the work of our society. I also expect to encourage increased participation by industry representatives at NESACS events.

Thank you for your vote and your support.

Councilor/Alternate Councilor Candidate 9

Raj (SB) Rajur

Education: Ph.D. in Organic/Medicinal Chemistry, Karnataka University, Dharwad, India (1988); Postdoctoral Fellow, University of Texas Southwestern Medical Center, Dallas (1988-1990); and Boston College, Chestnut Hill, MA (1990-1992)

Professional Experience: Instructor, Massachusetts General Hospital, Harvard Medical School, and Shriners Burns Institute (Boston, MA). Adjunct assistant professor, Northeastern University (Boston), Group leader Millipore Corporation (Bedford, MA), Project leader, ArQule, Inc. (Woburn, MA). Founding member and co-chair of Massachusetts Biotechnology Council CRO CMO forum. Presently, Founder, Chairman and CEO CreaGen, Inc, (Woburn, MA), (Founded 2002) and CreaGen Life Science Accelerator (Founded 2013)

ACS/NESACS Service: Chair NESACS (2021), Chair-Elect NESACS (2020), Program Chair, Medicinal Chemistry Division, NESACS (2003-present); Alternate Councilor, NESACS (2005-present); NESACS Nominating Committee (2008); NESACS election committee (2014), member of Organizing Committee, NESACS, IUPAC and RSC-US-Sponsored Advances in Chemical Sciences Symposium Series (2007-2018). ACS Carrier consultant (2013-present)

Membership/Honors: ACS Organic Chemistry Division, ACS Medicinal Chemistry Division AAAS, and Indian Chemical Society. Reviewer, journal of pharmaceutical sciences (ACS journal), Reviewer, BU ignition award, Listed in Who's Who in Science and Engineering. Invited speaker at several international conferences. Serving on advisory board of many Indian cultural and community organizations.

Position Statement: It would be an honor to serve as councilor to our local section. As an entrepreneur, scientist, educator and active collaborator I would bring an impressive amount of expertise and leadership to our section.

Scientific impact: I have been serving as the program chair for the medicinal chemistry section of NESACS since 2001. In my tenure as program chair, my mission has been to bring quality drug discovery science to our May, September and December annual symposia. The purpose of bringing good pharmaceutical science to our very active local section audiences is multifaceted. Our territory now houses the biotech hub of the world and has become a location where every multinational pharmaceutical company wants to collaborate, headquarter or establish a Center of Excellence. We, as a section, need to be exposed to a cross section of the science that is ongoing in the industry. Our meetings are venues for the exchange of ideas between industrial and academic participants. And, most importantly, our meetings are places where students from our many prestigious colleges and universities can network with professionals and learn from the symposia topics that feature cutting edge science.

I am proud to say that I was one of the founding members of Our annual Advances in Chemical sciences symposium and it has become the signature events and attracts more than 250 participants every year.

Since 2001 I have been serving as an Alternate Councilor for our section. I have regularly attended the NESACS monthly meetings and contributed several new ideas and inputs to these meetings. I have also regularly represented NESACS at national ACS meetings and participated in governance meetings.

Moving forward, as councilor, I will continue to support and encourage NESACS meetings that bring topnotch science to our audiences of academic and industrial professionals and students. I also plan on initiating the establishment of the Medicinal Chemistry Prize and also an exchange program with Indian universities similar to the German Exchange program.

Leadership and collaborations: Having worked in the biotech industry for the last 20 years in various leadership positions and having established my own company CreaGen Biosciences in 2001, I recognize the value of networking and collaboration. In 2010 I helped the Massachusetts Biotechnology Council establish a CRO/CMO Forum that represents all the Contract Research Organizations in Massachusetts. As the founding member and co-chair of this division, I have worked with committee members, volunteers, and industry leaders to raise funds and organize annual CRO/CMO symposia. These symposia bring more than 500 companies and leaders under one roof to exchange ideas, establish dialogue and address the needs of the pharmaceutical and biotechnology industries.

If elected, I will bring the same enthusiasm, spirit, top quality programs and collaborative efforts to our locale section. Such programs can help our members participate actively in our monthly meetings and also network with speakers, attendees and decision makers. I would also establish collaborations between Massachusetts Biotechnology Council, Massachusetts Life Science Center and other local life science organizations to expand the collaborations and visibility of NESACS.

Finally, the history of our section is immense and impressive. I hope to add to this legacy if elected. Thank you for your consideration and support.

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Councilor/Alternate Councilor Candidate 10

Ray Lam

Education: M.Sc. Chemistry with Industrial Experience, University of Bristol, UK (2004); Ph.D. Inorganic and Materials Chemistry, University of Bristol, UK (2008)

Professional Experience: Associate Professor, Massachusetts Maritime Academy (2013–Present); Chapter Director, Massachusetts State College Association (2020–Present); Adjunct Faculty, Emanual College, MCPHS University (2012¬–2013), Providence College (2011–2012); Postdoctoral Research Associate, University of Pittsburgh (2008–2010)

NESACS Service: Chair, National Chemistry Week (2016¬–Present); Alternate Councilor (2021–Present)

Honors: ACS Local Section 2020 Outreach Volunteers of the Year

Statement: It is a great honor to be nominated for the Councilor position and I am very excited to have the opportunity to serve our section. I have been an alternate councilor since the beginning of this year and have recently attended the ACS training webinar. During my tenure as Chair for National Chemistry Week, I have experienced first-hand the power and importance of outreach programs. If elected as councilor, I would like to be more involved with coordinating and designing outreach programs at the national level. I believe my diverse background and experience as an outreach coordinator would bring new ideas to committees. I would also like to gain a better understanding and be more involved with NESACS to better serve our section. Thank you for your consideration and your support.

Councilor/Alternate Councilor Candidate 11

Daljit Matharu

Education: Mchem, Medicinal Chemistry, Nottingham Trent University, UK (1997 - 2001). Ph.D., Organic Chemistry, University of Warwick, UK (2003 - 2007). Postdoctoral Fellow, Princeton University (2007 - 2008). Postdoctoral Fellow, The Pennsylvania State University (2008 - 2010). Postdoctoral Fellow, University of Kansas (2010 - 2014).

Professional Experience: 2020 - present Senior Scientist, Medicinal Chemistry, Sanofi, Waltham, MA. 2020 – 2020. Senior Scientist, ELT Medicinal Chemistry, GlaxoSmithKline, Cambridge, MA. 2019 - 2019 Scientist, Medicinal Chemistry, Alkermes, Waltham, MA. 2016 - 2019 Scientist, Medicinal Chemistry, Ironwood Pharmaceuticals, Cambridge, MA. 2015 – 2016 Research Scientist, Northeastern University, Boston, MA. 2014 - 2015 Research Scientist, Colorado Center for Drug Discovery, CSU, Fort Collins, CO.

Professional Memberships: 2008 – present: American Chemical Society, Medicinal Chemistry and Organic Chemistry Division. 2008 – present: Royal Society of Chemistry (MRSC).

Honors: Teaching Assistant Award obtained at University of Warwick by passing a Further Adult Education Teaching Course (2004). EPSRC Doctoral Training Account Award, University of Warwick (2004 – 2007).

NESACS Service: Alternate Councilor (2018 to present).

Personal Statement: I am honored to be considered for the Councilor position in the upcoming 2021 elections and am very excited to have the opportunity to serve our section in this capacity.

Last year will be remembered for many things as it relates to the COVID-19 pandemic. We all learnt to be very adaptable to the challenges that we faced. Despite the disruptions caused by the pandemic, 2020 was a banner year for our industry with regard to drug approvals. From a local perspective, Massachusetts-based companies were once again making headlines for the right reasons, with the state's ecosystem raising $5.8 billion in venture funding, an impressive 41% of all nationwide biopharma venture funding, not to mention the dearth of local establishments becoming publicly traded companies – this all bodes well for our ongoing research and development efforts. As the biotech hub of the world, we can all be immensely proud of our local company, Moderna and their exceptional delivery of a mRNA vaccine in record-breaking time, enabling us to edge closer to some semblance of "normal".

On a personal note, last year managed to be a rewarding one, as I gained my first experience in working in the DNA-encoded library space at GSK, which was followed by a permanent offer to join the medicinal chemistry team at Sanofi.

I have had the privilege of serving as an alternate councilor and represented the committee at the 2019 Fall ACS conference in San Diego. Interacting with members at the local and national level and hearing about the immense work being done by ACS's passionate volunteers in the local communities, was truly inspiring. As a councilor, I believe my "people skills" would allow me more involvement and I genuinely look forward to being a key contributor in maintaining the strength of our local chapter.

A recent contribution to local events that I am very proud of was my representation of Alkermes on the 2019 Boston Symposium on Organic & Bioorganic Chemistry (BSOBC) organizing committee, where I was instrumental in securing the academic co-chair (Professor George O'Doherty of Northeastern University) for the morning session. In the same vein, I will serve as the Sanofi representative for the upcoming 2021 BSOBC symposium, which will again be held virtually this year. We have a number of other signature events throughout the calendar year, and if elected as a councilor, I can positively use this experience to help bring cutting edge science to our local section audiences. Most importantly, our meetings provide a unique platform for the exchange of ideas between industrial and academic participants and if elected, I will champion greater diversity and inclusion within our chemistry community.

I hope that your affable vote will allow me to serve as councilor with the same verve, dedication, and commitment that I pursue all endeavours.

Councilor/Alternate Councilor Candidate 12

Andrew Scholte

Education: B. Sc. (Biochemistry; 1st Class Honors) Simon Fraser University, 2000; Ph.D. (Chemistry) University of Alberta, 2006; Postdoctoral, Boston College, 2006-2008.

Professional Experience: Sanofi, Integrated Drug Discovery, Principal Scientist and Lab Head, 2018-present; Sanofi Genzyme, Integrated Drug Discovery, Senior Scientist, 2016-2018; Sanofi, a Sanofi Company, Medicinal Chemistry Department, Staff Scientist II, 2012-2016; Genzyme, Medicinal Chemistry Department, Staff Scientist I, 2008-2012; Boston College, Chemistry Department, NSERC Postdoctoral fellow with Prof. Marc Snapper, 2006-2008.

Honors/Awards: ACS Leadership Development Award (2010); Natural Sciences and Engineering Research Council of Canada (NSERC) PDF (2006-2008); Outstanding Oral Presentation-Canadian Society for Chemistry (2005); Canada Graduate Scholarship (2003-2005); NSERC Postgraduate Scholarship A (2001-2003); Alberta Heritage Studentship (2000-2005); Faculty of Science Graduate Entrance Scholarship (2000); Department of Chemistry Entrance Scholarship (2000); Walter H. John Scholarship (2001-2005); Mary Louise Imrie Graduate Student Award (2004); Alfred Bader Scholarship-Canadian Society for Chemistry (2000).

Service to the Chemistry Community (USA and Canada): Member of the ACS since 2006; President of the 1st Banff Symposium on Organic Chemistry Organizing Committee; Member of the Canadian Institute of Chemistry since 2000. Member of the Long Range Planning Committee, Division of Medicinal Chemistry – ACS, 2020-present.

NESACS Service: Chair (2019); Councilor (2018-present); Alternate Councilor (2012-2017), Program Chair, Northeast Regional Meeting (NERM) 2021; Member of the Nominating Committee (2015, 2020); Member of the German Exchange Program (2014-present); Member of the German Exchange (GEX) steering committee (2013-present); Member of the Medicinal Chemistry Committee (2012-present) Vice Chair of the NSYCC (2010-2011). Member on the NESACS committee for the 2010 ACS meeting in Boston, MA (Katherine Lee-Chair).

Statement: I am honored to be nominated for election as a NESACS councilor. For the past several years I have taken on increasing leadership roles within NESACS. From 2018-2020, I was an officer for the section and Chair in 2019. I am program chair for the Northeast Regional Meeting (NERM), which was postponed until 2023. I am also involved with the ACS on the national level. I am on the long-range planning committee for the Division of Medicinal Chemistry. I have organized multiple symposia at national ACS meetings and engaged colleagues internally at Sanofi and externally to be more involved with the society.

Over the last 20 years I have been actively involved with serving the scientific community in the United States and Canada. During my undergraduate studies at Simon Fraser University, I was the President of the Biochemistry and Chemistry Undergraduate Student Union. As president I initiated a career symposium program where students could learn more about potential career opportunities in both academic and industrial fields. During my graduate school training at the University of Alberta, I established a new conference for graduate students in Chemistry. The Banff Symposium on Organic Chemistry is held every two years in Banff, Alberta and aims to highlight graduate student's research while providing an opportunity to discuss their work with industrial, post-doctoral, and faculty researchers. In 2016, I was fortunate enough to be elected as a councilor for the NESACS and I am running again to be re-elected as a councilor on the NESACS board.

Councilor/Alternate Councilor Candidate 13

Ashis K Saha

Education: M.Sc. Chemistry IIT Kanpur, India. Ph.D. Chemistry Univ. Michigan, Ann Arbor. Post-doctoral Research: University of California, Berkeley

Professional Experience: Pharmaceutical Industry/Biotech R&D. Currently, Vice President Drug Discovery, Tarveda Therapeutics, Watertown, MA; Prior experience: Co-founder & CSO Dover Lifesciences, Boston. VP, Discovery Research TCG Lifesciences, Boston & Kolkata, India; Executive Director, Predix, Lexington, MA; Director, Praecis, Waltham; Group Leader, Viropharma, Exton, PA; Principal Scientist, Johnson & Johnson (Janssen), Spring House, PA.

Chemistry & NESACS Service: ACS Member since 1983. POCC (Philadelphia Organic Chemistry Club, Univ of Pennsylvania): Past Chair Elect & Chair. NESACS: Symposium committee member, Process Chemistry, 2008-10, 2019-. Treasurer, 2017-. Recent past ACS alternate councilor.

Statement: It is a pleasure and honor to serve as treasurer to the Northeastern Section of the American Chemical Society. Early in my tenure, I initiated streamlined utilization of online banking which helped improve payments to our vendors. Implementation of expense templates helped standardize payments including to committee members, symposium speakers and awardees. I improved the chart of accounts to simplify income/expense activities of member volunteers and symposium committees. I hired a bookkeeper which greatly improved tracking of revenue and expenditures. Our organization has developed healthy revenues that more than doubled in past few years thanks to generous corporate sponsorships of our many diverse chemistry symposia, vendor support and endowments/trusts. While Covid posed a challenge in 2020 reducing such contributions greatly, diminished event expenditures allowed our cash position to remain healthy. As in-person events resume late in 2021 or early 2022, our financial books and budgets appear well positioned for a return to the vigor members expect of our section. Much needs to be done however including improved organization and storage/archival of income/expense records which may become a necessity especially if our revenues continue to exceed full audit thresholds. Ensuring financial books stay robust while supporting proposals for new activities or symposia will require contin-

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ued budget vigilance. In the coming months and years, it may also be prudent to streamline our investment account holdings provided there is the need as articulated by the trustees. I will aim to improve all aspects of our financial operations with the wonderful support of our board and general members. Thank you!

Councilor/Alternate Councilor Candidate 14

Yun Ding

Education: BA Chemistry 1993, East China University of Science and Technology; Master in Organic Chemistry 1996, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences; Ph.D. in Chemistry 2002, University of Florida; Postdoctoral Fellow, The Scripps Research Institute, San Diego 2002-2004.

Professional Career: GSK Fellow, Scientific Leader/Manager, Chemistry, GlaxoSmithKline 2007- present; Staff Scientist, Chemistry, Praecis Pharmaceutical Inc. 2004-2007.

ACS Service: Member of ACS 2003-present (ORGN and MEDI Divisions); ACS National meeting, Advances in on-DNA Reaction Development for Encoded Library Technologies, Organizer (ORGN010A, 2021); Reviewer for the ACS Journals, including Organic Letters, JMC, Bioconjugate Chemistry, ACS Comb Sci., ACS Catalysis.

Other Professional Service: Boston Symposium of Organic & Bioorganic Chemistry, Chair 2017, Organizing Committee 2016-2018; Symposium "Better Leads, Better Drugs: Innovation in Screening Libraries", Co-organizer 2019; International Symposium on DNA-encoded Chemical Libraries, Chair and co-organizer 2021, Scientific Committee 2019; Gordon Research Conference Medicinal Chemistry, co-chair for DEL session, 2019.

Research Interests: DNA-encoded library technology, drug discovery, chemical technologies, chemical biology, high-throughput screening, medicinal chemistry.

Position statement: I am honored to be considered for election as a Councilor for NESACS this year. As a GSK Fellow, I am passionate about connecting chemists from pharmaceutical industry and academia institutions. In my expertise field of DNA-encoded library technology, I have contributed to bring together chemists in the DEL community from all over the world. I'd like to expand my passion for connecting chemists to broader ACS organization, which inspires me to participate in ACS governance at both a local and national level. I am committed to ensuring we continue to provide chemists with ample opportunities to come together to share science and network. In the Boston area we are fortunate to have a vibrant scientific community which facilitates quality scientific programming. While our events attract many local chemists, I believe there is an opportunity for even broader engagement, including attracting new volunteers, especially as new companies continue to move to the area. It is at these NESACS-sponsored events that we learn what is important to our colleagues to ensure the opinions of our local section are well-represented at a national level. As a Councilor I would continue to raise awareness of these valuable events to further connect the community to ACS and recruit new volunteers.

Councilor/Alternate Councilor Candidate 15

Karen N. Allen

Education: B.S. (Biology) 1984, Tufts University, Ph.D. (Biochemistry) 1989, Brandeis University, American Cancer Society Fellow (Biochemistry), 1989-1993 MIT, Brandeis University.

Professional Experience: Chair of Chemistry, Professor of Chemistry, Professor of Material Science and Engineering, faculty of the Department of Pharmacology and Experimental Therapeutics, faculty of the Department of Physiology and Biophysics, Boston University.

Professional Service: Nominating Committee, ACS, Biological Chemistry Division (2001), Program Chair, ACS National Meeting, Biological Chemistry Division (2006), Advisor, ACS Biological Chemistry Division, (2016-2018), Associate Editor, BIOCHEMISTRY (2006-2016), Editorial Advisory Board, Chemistry Reviews (2009-2012), Esselen Award Committee and Chair, NESACS, 2015-present, Co-Chair, Gordon Research Conference, Enzymes, Coenzymes, and Metabolic Pathways (2002), Chair, 20th Enzyme Mechanisms Conference (2009), Secretary, ASBMB (2013-2016), Council, ASBMB (2010-2013), co-founder and member, WiBMB (2019-present) contributor, Faculty of 1000, (2003-present), Mentor, ASBMB Grant Writing & Mentoring workshop (2014-2015), Chair, ASBMB National Meeting, Women Scientist Mentoring/Networking (2013-2018), Associate Editor, Beilstein J. Org. Chem. (2017-present), Editorial Advisory Board, Archives Biochem. Biophys. (2018-present), Editorial Advisory Board, Structure. (2019-present), Editorial Advisory Board, Frontiers Molecular Biosciences. (2020-present), NIH, Review Panel Pathway to Independence program, (2011), Chair, NIH Special Emphasis Panel, Macromolecular Diffraction Resource (2012). NIH, Review Panel High-Throughput-Enabled Structural Biology Research (2012), Molecular Structure and Function A Study Section (2016-2020), Areas of Research: Biochemistry: mechanistic enzymology, X-ray crystallography, enzyme evolution.

Statement: I am honored to be considered for the position of Councilor representing NESACS. I am in my second term as a member of the Esselen Award Committee and have been excited by the enthusiasm of our members for the award lecture and programming around that award, especially the opportunities for a luncheon of the younger chemists with the awardee. As a Councilor, I will work to connect NESACS with opportunities offered at the national level as well as to promote our activities at the National level. I am especially excited to work toward greater involvement of women chemists and younger chemists and build towards greater eq-

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uity and inclusion in our Society. I will strive to find opportunities to find new ways to support our membership in order to encourage participation of new members in the ACS. I hope to gain your support via your vote.

Councilor/Alternate Councilor Candidate 16

Elizabeth Draganova

Education: B.S. Biochemistry, Kennesaw State University, GA (2011); Ph.D. Chemistry, Georgia State University, GA (2016); Postdoctoral Scholar, Tufts University, MA (2016-present).

ACS Service: ACS Graduate Education Advisory Board (GEAB) Member (2018 – present); ACS Society on Chemical Education (SOCED) Task Force (2019 – 2020); ACS Atlanta Local Section Member (2014 – 2016) – assisted in re-establishing the Women Chemists Committee (WCC); ACS Biological Chemistry Division Member (2012 – present); ACS Member (2012 – present).

NESACS Service: NSYCC Past Chair (2020-present); NESACS Nominating Committee (2020); NSYCC Chair (2018 – 2020); co-wrote the ACS Innovative Project Grant NSYCC Government Affairs Workshop application – funded Spring 2020; co-wrote the application for the ACS Local Section Members Engaging Through Technology (METT) Grant – funded Spring 2019.

Relevant Memberships: AAAS, Protein Society, and AWIS.

Honors/Awards: Associate Fellow, Intersections Science Symposium (2021); American Society for Virology Postdoctoral Scholar Travel Award (2020); Tufts Institutional Research and Career Development Award (IRACDA) Postdoctoral Fellowship, NIH/NIGMS K12 Award (2019-present); F32 National Research Service Award Postdoctoral Fellowship, NIH/NIGMS (2017 – 2019); Natalie V. Zucker Research Grant, Tufts University (2017); Collaborative Research Travel Grant, Burroughs Wellcome Fund, (2017); Graduate Teaching Award, Georgia State University (2016); Younger Chemist Leadership Development Award, National YCC, ACS (2016); Poster Award, Molecular Basis of Disease Research Day, Georgia State University (2015); Student Leader of the Year Award Nominee, Georgia State University (2015); Graduate Teaching Award, Georgia State University, (2015); Outstanding Professional Service, Georgia State University (2014); Molecular Basis of Disease Fellowship, Georgia State University (2012 – 2016); Graduate Teaching Award, Georgia State University, (2012); National Chemical Honors Society, Kennesaw State University, (2010 – 2011); HOPE Scholarship, Kennesaw State University, (2007 – 2011).

Statement: I am honored to be nominated for the position of Councilor and would happily represent NESACS at both the local and national levels. The ACS has been a part of my life since my graduate career and has had a profound effect on my career trajectory thus far. I look forward to continuing to expand my involvement within the section and ACS as Councilor.

During my graduate career, I was heavily involved in my local section (Atlanta chapter) where I helped re-establish the section's Women Chemists Committee. This experience resulted in a rapid expansion of my network which allowed me to seamlessly get involved with NESACS after moving to Boston, MA for my postdoctoral career. Shortly after being on campus, I reached out to the 2017 NSYCC executive board with hopes of joining the organization. Little did I know, I would be running for Chair and getting the opportunity to work with so many talented and eager younger chemists.

As NYSCC chair, I worked with a fantastic team of individuals who were deeply committed to providing all types of career development activities for local Boston younger chemists. Together, we organized and orchestrated one of the largest attended Northeast Student Chemistry Research Conferences (NSCRC), revamped our annual career symposium, hosted networking events and participated in chemistry outreach. Each year, we raised thousands of dollars for our events and fostered connections with other local MA sections. We also coordinated an ACS ChemIDP workshop (alongside Dr. Penny Beuning at Northeastern University) which brought National ACS to Boston where they gave an informative workshop on how younger chemists can use the ACS ChemIDP tool to plan their careers. This event was a direct outcome from my position on the ACS Graduate Education Advisory Board and since it was so successful, NSYCC is bringing it back as a part of the YCC symposia at NERM 2023. NSYCC continues to remain one of the most active parts of NESACS, even during a global pandemic, and I look forward to helping NSYCC expand its connections at the National level if elected as Councilor.

Given my experiences thus far with ACS, I feel confident in representing NESACS at the national level. My experiences as a female younger chemist give me a perspective which I will use to help shape ACS programming to attract a variety of other younger chemists, ensuring the ACS continues to grow as a diverse institution. Overall, I look forward to learning more about ACS governance and continuing to serve our extraordinary local section as Councilor. ◇

> ***"I am among those who think that science has great beauty."***
>
> -Marie Curie

The Federal Circuit Adds Color to Formulation Claims in Olaplex v. L'Oréal

By Philip J. Hamzik, PhD
Phil Hamzik is a Patent Attorney in the pharmaceutical practice group at Wolf, Greenfield & Sacks, P.C. in Boston. This article was originally posted on Wolf Greenfield's life sciences IP blog, Wolf Tracks.

Olaplex v. L'Oréal involves a particular problem that can arise when claiming pharmaceutical and consumer product formulations. In particular, a chemical compound, such as maleic acid as recited in the asserted claims, may be converted to different forms (e.g., salts, such as maleate or hydrogen maleate) once added to a formulation. Claim limitations that aim to specify the amounts or concentrations of such compounds in claimed formulations can be problematic when it is unclear how they are to be calculated.

Background

L'Oréal markets products to protect hair that has been colored or bleached. Olaplex, the owner of U.S. Patent No. 9,668,954 (the '954 patent), alleged in district court that L'Oréal infringed claims of the '954 patent through three of L'Oréal's maleic acid-containing hair treatment systems. Each system consists of three iterative treatments (referred to by the court collectively as the Step 1, Step 2 and Step 3 products). Adopting Olaplex's claim construction involving how to calculate the recited amount of maleic acid, the district court granted summary judgment finding infringement of the asserted claims, and issued a permanent injunction that blocked L'Oréal from making and/or selling its Step 1, 2 and 3 hair products. L'Oréal appealed. On March 4, 2021, the Federal Circuit affirmed the lower court's claim construction, but remanded to the district court for trial on the issue of infringement due to remaining questions of material fact under the adopted claim construction. After initially granting L'Oréal's motion for a stay, the Federal Circuit also vacated the permanent injunction.

Claims on Appeal

The claims on appeal were the "breakage claims" 14-16, 18 and 24-28 of the '954 patent. In an earlier decision on L'Oréal's petition for post-grant review of the '954 patent, the PTAB determined that the originally asserted claims—except for the breakage claims—were unpatentable as obvious. Claim 14, including base claim 1 and intervening claims 12 and 13, is reproduced below:

> 1. A method for bleaching hair comprising: (a) mixing a bleach powder and a developer to form a bleaching formulation; (b) mixing an active agent formulation comprising an active agent with the bleaching formulation to form a mixture, wherein the active agent is maleic acid; and (c) applying the mixture to the hair; wherein the active agent in the mixture is at a concentration ranging from about 0.1% by weight to about 50% by weight.
>
> 12. The method of claim 1, further comprising: (d) applying a second active agent formulation comprising maleic acid, wherein step (d) occurs subsequent to step (c).
>
> 13. The method of claim 12, wherein the second active agent formulation further comprises a conditioning agent.
>
> 14. The method of claim 13, wherein following step (d) breakage of the hair is decreased by at least 5% compared to hair bleached with the bleaching formulation in the absence of the active agent.

Claim Construction

The claim construction issue in this case represents a challenge in claiming formulations relating to how to go about defining the concentration of an agent that changes form in a mixture. Claim 14 of the '954 patent is directed to a method of bleaching hair in the presence of a bleaching formulation to which maleic acid is added. As agreed to by both parties, maleic acid is fully neutralized and converted to maleate (a salt) upon addition to the bleaching formulation. Thus, "the mixture" formed in step (b) of claim 1 does not actually contain maleic acid, as recited in the claim, because it is converted to maleate in the basic environment of the bleaching formulation. This fact complicates the meaning of claim 1 in terms of how to understand the recited calculation of the maleic acid concentration.

Claim 1(b) includes the step of adding maleic acid to a bleaching solution to form a mixture, "wherein the [maleic acid] in the mixture is at a concentration ranging from about 0.1% by weight to about 50% by weight." The problem noted by the court is that multiple constructions are possible.

L'Oréal argued that the claim should be construed as requiring maleic acid to be *present in the mixture* at the recited concentration, based on the plain language of the claim. By contrast, Olaplex argued that the claim should be construed as being based on the weight of maleic acid *added* into the active agent formulation, relative to the final weight of the mixture comprising the bleaching formulation. The district court agreed with Olaplex, and the Federal Circuit affirmed the construction. In doing so, the Federal Circuit acknowledged that under L'Oréal's claim construction, the claim term "maleic acid" would be rendered meaningless and unsatisfied since, as agree to by both parties, "there would be no maleic acid in the final bleaching solution."

The Federal Circuit relied on *Wasica Fin. GmbH v. Cont'l Automotive Systems, Inc.*, in which the court held that "it is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous."

continued on page 25

Olaplex v. L'Oréal

Continued from page 24

Olaplex's claim construction was also supported by Example 3 in the specification of the '954 Patent, which describes the amount of maleic acid as by weight *prior to* mixing with the bleaching formulation, consistent with claim 1. In addition, the court credited testimony of Olaplex's expert who explained that a person of ordinary skill in the art would understand that the recited maleic acid concentration refers to the amount of maleic acid in the active agent formulation *before* it is mixed with the bleaching formulation.

Summary Judgment of Infringement

The decreased breakage aspect of claim 14 depends upon the addition of the requisite amount of maleic acid to the bleaching formulation, as defined in claim 1. L'Oréal argued that summary judgment was not appropriate because there was a question of material fact as to whether its Step 1, 2, and 3 products contained maleic acid in the claimed amount.

With respect to the recited concentration of maleic acid, Olaplex's expert was able to show by nuclear magnetic resonance (NMR) that L'Oréal's Step 1 products contain added maleic acid between 10.2 and 10.6% by weight, well within the claimed range. L'Oréal countered that because the NMR testing was not able to distinguish between maleic acid and its salt forms, the testing failed to establish infringement because only maleic acid, if present in the correct amount, would have infringed the claims. Consistent with the affirmed claim construction, the Federal Circuit acknowledged that maleic acid salts (maleate, hydrogen maleate) detected in the mixture can serve as a proxy for determining the concentration of "maleic acid" since the salts were derived directly from the maleic acid that was added to L'Oréal's products. Accordingly, the Federal Circuit held that there was no question of material fact as to whether L'Oréal's Step 1 products contain the claimed amount of maleic acid.

However, the Federal Circuit agreed with L'Oréal's assertion that there was a question of material fact concerning whether the combination of its Step 1 and Step 2 products would have met the limitations concerning decrease in percent breakage as recited in claim 14. The court pointed to the district court's lack of analysis in this regard and that it did not provide a basis in fact for the finding that the hair breakage limitations of claim 14 were met. The Federal Circuit also agreed with L'Oréal that questions of material fact existed with regard to other limitations as well, and that the Step 3 products did not infringe because they were "at-home" products outside of the scope of the claimed hair bleaching methods.

Thus, Olaplex has another appointment to return to district court. The Federal Circuit vacated the injunction and remanded for further proceedings.

Takeaways

- For prosecutors drafting formulation claims, it is important to consider what the actual components of your formulation are, keeping in mind that chemical compounds can undergo changes (e.g., acid-base reactions, racemization, hydrolysis, tautomerization) under certain conditions. Although the Federal Circuit's flexible claim construction in this case is a victory for the patent holder, more precise claim drafting could have avoided this issue. The following are complementary claim approaches that could avoid issues raised in this case:
  - (i) Include claims that specify the actual components of the final formulation (for example, maleate or other salt forms instead of maleic acid in this case);
  - (ii) Include claims that focus on the process by which the formulation is prepared (for example, a formulation made by adding maleic acid to a mixture).
- Another way to strengthen a formulation claim is to explain, at least in the specification, how the concentration of a component should be calculated. Is it based on the amount present in the formulation, or based on the amount added?
- This case also serves as a reminder that claim limitations will likely be construed in a way that avoids rendering them meaningless or superfluous. ◇

Call for Nominations for Richards Medal

The ACS Northeastern Section is soliciting nominations for the 2021 Theodore William Richards Medal Award for conspicuous achievement in any area of chemistry. The medal honors the U.S.'s first chemistry Nobel Laureate and is awarded every two years. The medal was last presented in 2019 to Professor Chad Mirkin of Northwestern University.

Nominations must be submitted electronically in a single PDF file and must include brief (no more than 5 pages) curriculum vitae of the nominee and a clear, concise (no more than 2 pages) nomination letter that outlines the candidate's "conspicuous achievement in chemistry" on which the nomination is based. The packet should be submitted electronically as a single PDF file to NESACS Administrative Secretary Anna Singer, secretary@nesacs.org.

Nominations must be received by October 31, 2021. The Richards Medal will be awarded on Thursday, March 10, 2022.

More information about the Richards Medal, including a list of all previous recipients, can be found at http://www.nesacs.org/awards_richards-medal.html. ◇

ACS Scholar Discusses Her Experiences and Goals

My name is Eleane Lema (she/her) and I'm currently a senior at MIT studying Chemistry and Biology. Upon entering college, I was always so fascinated with the field of life science. I loved learning about how our immune system fights off infections, how genes segregate, and how plants produce food. I chose to pursue both Chemistry and Biology because I felt that these fields could not be studied alone, especially as it pertains to human health and disease. In my biochemistry classes, it was so clear to me how intertwined Chemistry and Biology are in explaining the molecular mechanisms of life. Through my research experiences on campus, I was able to explore this more in depth when I investigated KCS genes in the Arabidopsis plant and the bactericidal activities of the Human Calprotectin host defense protein with applications in inflammatory diseases. These experiences further strengthened my interest in medical science and research applications to human health.

However, as I learned more about life science I became very interested in the societal, cultural, and political context of this field. Also, I realized that my technical studies were quite disconnected from the social issues that I and many other scientists hope to solve (climate change, food insecurity, etc.). Thus, starting in my junior year, I sought out to gain more contextual understanding of these issues through humanities courses in anthropology, women gender studies and public policy. These classes ultimately transformed my perception of science and its necessity to be more conceptualized in social issues through public policy and community-based work. This discovery has steered me to public health which, as a multidisciplinary field, considers science and its direct intersection with complex social and ethical challenges. I've had several public health internships working to combat these very issues, including environmental health, healthcare access, criminal justice and vaccine hesitancy. As I approach graduation, I believe that public health research now more than ever is needed, especially in this pandemic where science alone cannot solve our most pressing challenges. I aim to pursue environmental health and racial equity as a public health researcher in a health department or academic hospital. After a few years, I plan on earning a MPH in population health and health policy where I then hope to be in D.C. ◇

From the High School Classroom

By Steve Lantos, Chemistry Teacher, Brookline High School
Chair, NESACS High School Education Committee

Needless to say, this has been a challenging year for teaching and learning chemistry. The experience of beginning the school year entirely remote, then transitioning to hybrid, encountering disruptions to schedules, and attempting laboratory work with a split audience, half in-person with the other half on screen, has been daunting for both teachers and students. Yet, this school year is ending with a majority of students back in classrooms with the hope that the Fall will bring some kind of normalcy to the teaching and learning of chemistry.

The pandemic that began in early in 2020 moved the annual NESACS and ACS examinations and contests online, and caused the cancellation of our annual May Education Night meeting. In 2021, the NESACS Avery Ashdown Exam and the U.S. National Chemistry Olympiad (USNCO) Exam were both held remotely again. The ACS administered its local section exam for the Avery Ashdown competition, which NESACS has held annually since 1971. Nearly 120 high school students, coming from more than 30 public, private, parochial, and vocational high schools in Eastern Massachusetts and New Hampshire, sat for this year's exam during the last week of March, representing a slight increase in annual participation. ACS oversaw the national administration of its local section exams with nearly 200 other sections across the U.S. Prior to the pandemic, the Ashdown Exam had been administered in-person at Simmons College on the first Saturday in April. Keeping the exam in a digital format while maintaining, if not bolstering, participation overall throughout our section might be one positive result of using a remote format in the future.

As in past years, the top scorers from the NESACS Avery Ashdown Exam will be honored at the annual Education Night meeting on May 13, which will be held remotely this year, with a celebration of chemistry teaching and learning across the Northeastern Section. This year's featured speaker will be Bill Carroll, the engaging 2005 ACS President, who acknowledges the importance of chemistry education in his work and his role within the ACS. We look forward to welcoming him and attendees from across NESACS and beyond to our virtual Education Night to honor our most successful students and outstanding teachers. ◇

"Science can flourish only in an atmosphere of free speech."

- Albert Einstein

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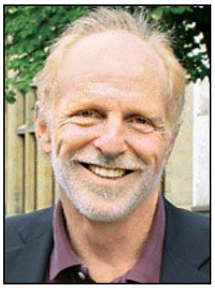
2020 ACS National Awards Ceremony

The Spring 2020 National Meeting in Philadelphia and the associated ceremony to honor the recipients of the ACS Awards were cancelled due to the COVID-19 pandemic. A year later, at the Spring 2021 Meeting, the virtual ceremony was held; the following awardees and sponsors from the Northeastern Section were recognized.

Amir H. Hoveyda, University of Strasbourg, France, and Boston College: *Herbert C. Brown Award for Creative Research in Synthetic Methods*, sponsored by the Purdue Borane Research Fund and the Herbert C. Brown Award Endowment. *"For his development of catalytic methods for chemical synthesis, most notably for olefin metathesis and enantioselective generation of fully substituted tetrahedral stereogenic centers."*



In addition, the *ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry*, sponsored by Strem Chemicals, Inc., went to **Bruce E. Bursten**, Worcester Polytechnic Institute. *"For distinguished contributions to inorganic chemistry as an outstanding researcher in inorganic electronic structure and bonding, inspirational teacher and author, and forward-thinking leader."*

Yogesh Surendranath (Preceptor, Massachusetts Institute of Technology, and **Anna Wuttig** (Student), University of California, Berkeley, *Nobel Laureate Signature Award for Graduate Education in Chemistry*, sponsored by Avantor Performance Materials. *"For contributions to energy conversion chemistry by developing comprehensive mechanistic models for the catalytic conversion of carbon dioxide to chemical fuels driven by renewable electricity."*

Also, **Herbert Mayr**, Ludwig-Maximilian Universität München, received the *James Flack Norris Award in Physical Organic Chemistry*, sponsored by the ACS Northeastern Section. *"For the development of a general organizing principle of polar organic reactivity based on neucleophilicity and electrophilicity scales."*

JoAnne Stubbe, Massachusetts Institute of Technology, *Priestley Medal*, sponsored by ACS. *"For 'Radical' ideas to understand how the building blocks of DNA are made: a compelling demonstration of the power of chemical investigations to solve biological problems."* She presented the Priestley Medal Address on, "The Road Less Traveled: For Love of Detection, Discovery, and All Things Radical."

The presentation of the 2021 ACS Awards will be made during the scheduled hybrid Fall Meeting in August. For information about all the ACS Awards, including lists of previous awardees, go to <https://www.acs.org/content/acs/en/funding-and-awards/awards/national/2021-national-awards.html>. ◇

Your one-stop source to career-related links in the Chemical Sciences

WWW.NESACS.ORG/CAREERS

Spring 2021 Virtual Regional Meetings

Registration is now open for the 2021 virtual Middle Atlantic Regional Meeting (MARM), Northwest Regional Meeting (NORM), and Great Lakes Regional Meeting (GLRM).

Discover and share research, participate in live virtual discussions and networking opportunities during the virtual poster sessions, and enhance your career during the **Middle Atlantic Regional Meeting (MARM)**, June 9-12.

The virtual **Northwest Regional Meeting (NORM)**, May 9-11, will bring together chemists of all types in a dynamic online setting. The virtual event will include symposia, poster sessions, and networking opportunities organized by Western Washington University. Thanks to the generosity of the NORM 2021 sponsors, student registration for the meeting is complimentary!

Register and join chemical professionals, students, and educators on June 6-9 for the virtual **Great Lakes Regional Meeting (GLRM)** . Participate in technical symposia, flash talks in place of poster presentations, workshops beginning as early as June 5, a career fair, networking opportunities, and award ceremonies.

Visit the ACS Regional Meetings home page for the complete calendar of upcoming meetings and other information. ◇

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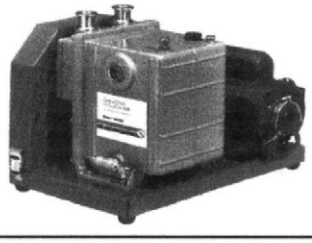
Thank you for your being a part of ACS, and for helping us grow and thrive.ACS Membership

Please write to MGM@acs.org with any questions you may have. ◇



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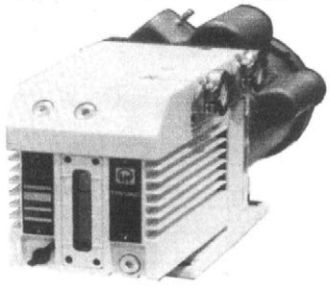

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Why does food taste better when it is grilled? What molecular compounds are in a great wine? Discover the delectable science of your favorite food and drink.

Popular Chemistry
Listen to experts talk about amazing hot science topics. Learn about the chemistry of rockets, the effect of viruses on human history, or the molecular nature of a hangover.

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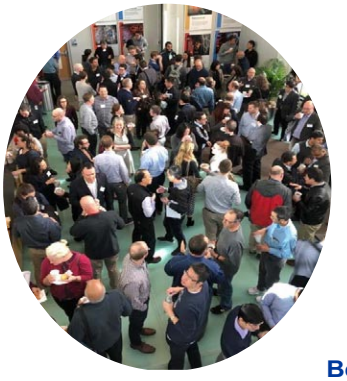

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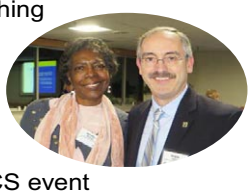

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Calendar

Check the NESACS home page for late Calendar additions: http://www.NESACS.org

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

These include:

Boston College
https://www.bc.edu/content/bc-web/schools/mcas/departments/chemistry/news-and-notes.html#events

Boston University
https://www.bu.edu/chemistry/seminars/colloquium/

Brandeis University
https://www.brandeis.edu/chemistry/events.html

Harvard University
https://chemistry.harvard.edu/calendar/upcoming

MIT
https://chemistry.mit.edu/events/

Tufts University
https://chem.tufts.edu/seminars.html

UMass Boston
https://www.umb.edu/academics/csm/chemistry/events

UMass Lowell
https://www.uml.edu/Science/chemstry/colloquia.aspx

University of New Hampshire
https://ceps.unh.edu/chemistry/seminars/spring-2021-seminar-series

May 2021

May 3
Prof. Bryan Dickinson (Univ. Chicago)
Brandies, 4:00 pm

May 5
Prof. Jeremy Baskin (Cornell)
Boston College, 4:00 pm

May 6
Dr. Jonathan Fontalvo (Zapata Computing)
Harvard, 3:00 pm

Prof. Alison Narayan (Univ. Michigan)
MIT, 4:00 pm

May 11
Prof. Cathy Wong (Univ. Oregon)
In situ transient absorption spectroscopy during materials formation
MIT, Rm 6-120, 3:00 pm

May 13
Prof. Tianning Diao (New York Univ.)
Harvard, 3:00 pm

May 18
Dr. Parisa Mehrkhodavandi (UBC)
MIT, 3:30 pm

May 20
Prof. Bryan Dickinson (Univ. Chicago)
Harvard, 3:00 pm

May 27
Prof. Pamela Chang (Cornell)
Harvard, 3:00 pm

June 2021

June 2
Prof. Will Gutekunst (Georgia Tech.)
BC, 4:00 pm

June 8
Dr. Pinar Ackora (Stevens Inst. of Tech.)
MIT, 3:30 pm

Notices for The Nucleus Calendar of Seminars should be sent to: Samurdhi Wijesundera, Email: samu.amameth@gmail.com ◇

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