Monthly Meeting
January Meeting with H.N. Cheng, 2021 President of the ACS

2021 Chair’s Statement
By Raj (SB) Rajur

National Chemistry Week
By Ray Lam

NSYCC Career Symposium
By Meredith Ward
Transitioning into 2021

As it turns out, I never got a chance to proofread The Nucleus in 2020. In the rather topsy-turvy year that we had, many different things happened or did not happen. I was beginning to feel a bit useless as far as being a member of the BOP. It was then that I decided to speak with Kathy and ask her what next steps I should take since I had no desire to just be present at the meetings and do little else. It was then that she broached to me the topic of becoming Editor and, after some consideration, it is in that capacity that I am writing now. I can only hope to reach the eminent level of Michael Filosa’s 15 years as Editor of The Nucleus. I certainly have no animosity as to what will be my situation in the year 2036, which would be longer than I have been working professionally as of today. Yet time has a way of moving unheeded to the travelers on her path and we will yet see what the future holds.

Regarding this month’s contents of The Nucleus, as is our yearly tradition, and always an honor for the Northeastern Section, the President of the ACS will be attending and speaking at the January monthly meeting. Dr. H. N. Cheng will be presenting a talk on “Sustainability and Green Chemistry,” and I very much look forward to listening to his insights and ideas. This will also mark the 1,000th monthly meeting of NESACS, hence’s the next one thousand! Dr. Raj Rajur gives his statement as Chair of NESACS for 2021. I look forward to his strong leadership this year and am especially intrigued by the concepts of a new Medicinal Chemistry prize and a new exchange program with universities in India.

Chair-Elect Carol Mulrooney and Past-Chair Anna Sromek have put together a description of the nominations of NESACS in nine categories for the 22nd annual ChemLuminary Awards. It is a real testament to the hard work of the NESACS community that we should have been nominated for so many awards in 2020.

What’s Yours?

DMRP Scientist, LC/MS Product Specialist, Mass Spec Operator, Staff Investigator, Process Chemist, QA Manager, Synthetic Chemist, Lab Instructor... Many local employers post positions on the NESACS job board.

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Dear Readers, I hope you will find this first issue of The Nucleus with me as Editor to be up to the high standards you have come to expect. Here’s to a bright 2021! ☀
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Cover: Dr. H.N. Cheng 2021 ACS President. Photograph by Peter Cutts.

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It is a great pleasure and an honor for me to serve as the Chair of the Northeastern Section of the American Chemical Society (NESACS) for 2021.

I would like to thank the NESACS officers and volunteers who have made our section one of the most dynamic sections within the ACS. I look forward to working with this dedicated and creative group to continue to promote the NESACS mission of “The advancement of chemistry and chemical engineering, the promotion of research, the improvement of the qualifications of members through high standards of educational and professional ethics, the increase and diffusion of chemical knowledge, and the promotion of scientific interests and inquiry.”

Our Section is the home of many diverse committees that are comprised of talented scientists in the interdisciplinary fields of chemistry, including the Medicinal Chemistry group, the Women Chemists Committee (WCC), the Younger Chemists Committee (YCC) and the Senior Chemists Committee (SCC). These groups offer exciting seminars, symposia and other events throughout the year, which provide unique opportunities for continuous education and networking. Our section will continue with its numerous public outreach programs including Project SEED, National Chemistry Week and the Chemistry Olympiad.

The year 2020 was unprecedented. In spite of the COVID-19 pandemic, we found a way to connect and communicate with our members using modern technologies. We successfully engaged the members by conducting monthly meetings and webinars via Zoom. moving forward, we will continue to use these avenues to conduct our monthly meetings and bring quality seminars.

My focus this year will be on the following strategic goals:

• Improving the sustainability of our section through actively recruiting new leaders and improving communication;
• Increasing section membership by enhancing our programs and supporting the interests of our constituents;
• Establishing collaborations between the Massachusetts Biotechnology Council, the Massachusetts Life Science Center and other local life science organizations to expand the collaborations and visibility of NESACS; and
• Initiating the Medicinal Chemistry Prize and also an exchange program with Indian universities similar to the German Exchange program.

Having worked in the biotech industry for the last 20 years in various leadership positions and having established CreaGen in 2001, I recognize the value of networking and collaboration. Through Medicinal Chemistry monthly meetings and annual Advances in Chemical Sciences Symposia, I plan to increase the networking and collaboration opportunities and exchange of ideas between industrial and academic participants. And, most importantly, I will continue to foster our meetings as 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.

For NESACS events and information please visit us at www.nesacs.org.

Finally, let me add that the history of our section is immense and impressive. In my term as the Chair of NESACS, I hope to add to this legacy. Thank you for your support.

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January Monthly Meeting

The 1,000th Meeting of the Northeastern Section of the American Chemical Society

Sustainability and Green Chemistry

H. N. Cheng
2021 President, American Chemical Society

January 14, 2021

4:30 Annual meeting
5:00 January Board meeting
6:00 Break for dinner
6:30 Meet and greet with Dr. Cheng
7:00 Monthly meeting with Dr. Cheng

The Zoom registration link is:
https://american-chemical-society.zoom.com/meeting/register/tZ0ufuqvq-TovH9K4hY3s7bbCDrzZhqHpOVo

Abstract:

Sustainability and Green Chemistry

With increasing public awareness of climate change, environmental pollution, and earth’s declining resources, sustainability and green chemistry have become hot topics these days. In 2015, the United Nations adopted 17 sustainable development goals (SDGs) to be achieved in 2030. As polymers are being used all around us, they play a major role in the achievement of these goals. In this talk, the speaker will provide an overview of the sustainability initiatives at American Chemical Society (ACS) and his platform as ACS President in 2021. He will also cover selected polymer research and development (R&D) areas that are related to sustainability and green polymer chemistry. The following examples will be shown: 1) to use natural renewable raw materials (e.g., polysaccharides, proteins, and triglycerides) as source materials for new chemistry and products; 2) to exploit biocatalysts (e.g., enzymes and micro-organisms) for chemical and polymer conversions; 3) to apply green chemistry concepts to conversion and processing; and 4) to develop green methodologies to promote the development of green products. In view of the relevance of sustainability and green polymer chemistry to our society, we can expect to see continued R&D and commercial activities relating to this field in the future.

Biography:

H. N. Cheng is the ACS President in 2021. He has been active at ACS for many years and has served in many leadership roles at local, division, and national levels. He obtained his B.S. from UCLA and his Ph.D. from the University of Illinois at Urbana-Champaign. He currently works at USDA Southern Regional Research Center in New Orleans. Over the years, he has been involved with the use of agro-based materials, biocatalysis, green processing, and green methodology. He has also contributed to polymerization theory and polymer NMR. He has authored or co-authored 280 papers and 26 patent publications. He has organized 40 symposia at national meetings since 2000 and edited 21 books.

He was selected as a Fellow of the ACS (2009), a Fellow of the ACS Polymer Chemistry Division (2010), and a Fellow of the ACS Agricultural and Food Chemistry Division (2018), among other recognition and awards.

What’s Yours?

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

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Webinar
“The Discovery of Sotorasib (AMG 510), a First-in-class Covalent Inhibitor of KRASG12C”

By Brian Lanman, Amgen

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

Thursday – January 21st, 2021
4.00 pm

Register for the January Webinar meeting at:
https://american-chemical-society.zoom.com/webinar/register/WN_f7lbcbQnQRG-PSkXoQsPJQ

SPEAKER
Brian Lanman
Director of Research, Amgen

Bio: Brian Lanman received his A.B. in Chemistry from Harvard University (1998), where he performed undergraduate research on the total synthesis of Taxol® in the labs of Yoshito Kishi. He subsequently completed doctoral studies at Harvard as an NSF research fellow under the guidance of Andy Myers, receiving A.M. (2000) and Ph.D. (2004) degrees for his work on the solid-supported synthesis of tetrahydroisoquinoline antitumor antibiotics. In 2004, he joined Larry Overman’s group at UC Irvine as an NIH postdoctoral fellow, where he developed methods to access the architecturally complex bis-guanidine marine natural product palau’amine and contributed to its structural revision. Brian joined the medicinal chemistry department at Amgen in 2006, where he has since led chemistry and discovery research efforts on projects in the inflammation, oncology, and cardiovascular therapeutic areas. Most recently, Brian led the medicinal chemistry team that discovered sotorasib (AMG 510), Amgen’s first-in-class KRASG12C inhibitor, which is currently in phase 2 clinical trials for the treatment of KRASG12C-mutant non-small cell lung cancer.

Abstract: KRAS is one of the most frequently mutated oncogenes in human cancer. Despite more than three decades of research, indirect approaches targeting KRAS mutant cancers have largely failed to show clinical benefit, and direct approaches have been stymied by the apparently ‘undruggable’ nature of KRAS. Cysteine-12 of KRASG12C has emerged as a unique vulnerability in KRAS-mutant cancers. I’ll describe our efforts to identify cysteine-reactive molecules capable of selectively inhibiting KRASG12C. Through iterative screening and structural biology efforts, we identified novel Cys12-reactive inhibitors that derived their potency from occupancy of a previously unknown cryptic pocket induced by side-chain motion of the His95 residue of KRAS. We leveraged knowledge of this cryptic pocket to design a series of inhibitors that demonstrated significantly enhanced potency relative to prior tool compounds. Extensive optimization of these leads led to the identification of a highly potent, selective, and well-tolerated covalent inhibitor, sotorasib (AMG 510), which has become the first direct KRASG12C therapeutic to enter human clinical testing.

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

Visit: http://www.nesacs.org/medchem.html
NESACS Nominated for Nine 2020 ChemLuminary Awards

By Carol Mulrooney and Anna Sromek

The American Chemical Society held the 22nd annual ChemLuminary Awards as a virtual event on December 9th, 2020. Although we missed the fun of attending this ceremony in person, the virtual program provided quite a good time for viewers. The evening began with introductions and an inspiring keynote address, followed by the award presentations and it even concluded with dancing! The ceremony video has been posted on the ACS website here: https://www.acs.org/content/acs/en/funding-and-awards/awards/community/chemluminary.html

The keynote speaker, Janet L. Bryant, is the winner of the 2020 award for Volunteer Service to the American Chemical Society. Ms. Bryant shared her top five reasons to volunteer:

1. **Network.** ACS activities help build our network in the chemistry community both locally and nationally.
2. **Continuing education.** Through weekly seminars, online symposia, career counseling, and virtual meetings, the ACS provides strong support for career development.
3. **“Chotchkes”!** Show your pride with ACS branded items.
4. **Mentors.** Join ACS to explore the power of networking and finding mentors through the ACS, and members are encouraged to actively seek what they need from ACS mentors.
5. **Community.** “One lives not just for oneself, but for one’s community.” -Justice Ruth Bader Ginsberg

The Northeastern Section members were finalists for nine awards this year. Here are the highlights from 2019 program running by multiple committees and NESACS volunteers.

Younger Chemists Committee: The NSYCC were finalists for Outstanding Local Section Younger Chemists Committee. Two large events are held every year by the NSYCC, the Northeast Student Chemistry Research Conference in the spring and the Career Symposium in the fall, both events consistently drawing a large audience of and providing strong value to the local chemistry students. The NSYCC also sponsored multiple networking events throughout the year and collaborated on many additional events with other NESACS committees, including the Women Chemists, Senior Chemists, and Government Affairs Committees, as well as networking events with our neighboring local sections.

Women Chemists Committee: The NESACS WCC were finalists for two awards this year: Best Overall WCC Local Section and MAC Industry Engagement & Outreach. Two networking events featuring talks by women scientific leaders were co-sponsored by Blueprint Medicines, a Cambridge based precision therapy company focused on cancers and rare diseases. These were the first two events of a series named “Catalyst: A Networking Series for Women in Chemistry”, with the goal of connecting and highlighting women in chemistry. The WCC also partnered with the YCC and SCC on several networking lunches during the year.

Government Affairs Committee: The NESACS GA Committee was a finalist for the ACS President’s Award for Local Section Government Affairs. Our active GA members have attended town hall and neighborhood meetings with U.S. Representatives Katherine Clark, Ayanna Pressley and Joe Kennedy III and communicated the importance of supporting science in the legislature. The GA Committee actively works with the NSYCC members to promote the importance of communicating science policy as well as exploring careers in this field.

Process Chemistry Symposium: The 2019 NESACS Process Chemistry Symposium was a finalist for the Best Event or Activity Organized by, or Benefiting, the Applied Chemical Technology Professional Community award, sponsored by the Committee on Technician Affairs. This symposium, held in October, showcased exciting developments in the process chemistry field and highly relevant applications in the pharmaceutical and biotech industries. The symposium was filled to capacity and extremely well-reviewed by attendees, who were impressed by the presentations of cutting-edge technologies as well as practical tips for laboratory work.

Northeastern National Chemistry Week: The organizers of the 2019 Northeastern National Chemistry Week Celebration were nominated for the Outstanding Ongoing NCW Event award sponsored by the Committee on Community Activities. There were two events in 2019, one at the Museum of Science, Boston, and a second at Boston Children’s Museum. Volunteer educators, who included members of NESACS, students from high schools and universities, local chemical companies, and non-ACS community members, conducted hands-on experiments with museum attendees. An estimated 1300 members of the public were engaged with this programming.

Northeastern Chemists Celebrate Earth Week: NESACS was also a finalist for the award for Outstanding Community Involvement in CCEW, sponsored by the Committee on Community Activities. A number of different community groups participated in this year’s program and helped make it an outstanding success with volunteers from local colleges, universities, museums, and non-profit organizations. Overall, approximately 80 committed volunteers engaged about 500 community members in hands-on activities on topics related to the CCEW theme of “Take Note: The Chemistry of Paper.”

NESACS: Members of NESACS, in collaboration with the National YCC, International Young Chemists Committee, and

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NSYCC Career Symposium Goes Virtual

By Meredith Ward, NSYCC Chair

With contributions from Tongtong Luo (NSYCC Social Chair), Klaudja Caushi (NSYCC Secretary/Publicity Chair), and Zemen Berhe (NSYCC Chair-Elect)

The 5th Annual NSYCC Fall Career Symposium went virtual for 2020. Instead of a day-long event with concurrent panels and in-person networking, events were spaced out over three weekends in an effort to (1) not overwhelm attendees with the commitment to a day-long Zoom event, and (2) allow for all panels to be held at separate times, so attendees could attend all four panels if they’d like.

On November 7, a resume workshop and an interview workshop were held as the first events of the 2020 Career Symposium. Roy Simmons and Patrick Gordon, both ACS Career Consultants who have graciously volunteered their time to the NSYCC Career Symposium for over 5 years, held distinctive discussions on how to perfect your resume and how to ace your interview. They discussed proper formatting of resumes and how to answer those tough questions at your interview. Attendees also practiced giving and receiving interviews in small groups, through the use of Zoom breakout rooms.

On November 14, a LinkedIn workshop, a graduate school panel, and an industry careers panel were held. Kristin McGillicuddy, a marketing professor at University of Massachusetts Dartmouth, held this very popular workshop for the second consecutive year. She discussed features that LinkedIn provides and how to make sure your profile stands out.

A panel on graduate school featured Vanna Blasczak (UMass Boston), Jonathan Flores (UMass Boston), Minte Kassu (Northeastern University) and Devin Swiner (The Ohio State University) and was moderated by Meredith Ward, NSYCC Chair. These graduate students discussed how to choose your advisor, how to make the transition from one research area to another, and the importance of not being hard on yourself.

The final panel on the second day was an industry careers panel featuring Dr. Crystal Shih Byers (Ascidian Therapeutics), Dr. Ping Zhang (Novartis Institute for Biomedical Research), Dr. Katherine Lee (Pfizer), and Matt Coon (Bluebird Bio), which was moderated by Zemen Berhe, NSYCC Chair-Elect. These panelists discussed the transition from college into their career, including important skills and experiences to obtain during college that aided them in that transition. The topic of mentors was discussed, as was the best way to network as a young scientist and advice they were given that helped their career.

On November 21, a nontraditional careers panel, an academic careers panel, and a resume review session were held. The nontraditional careers panel featured Dr. Doris Lewis (NESACS Government Affairs Committee), Dr. Stephen Davey (Nature Reviews Chemistry), Enoch Allotey (UMass School of Law), and Dr. John de la Parra (The Rockefeller Foundation) and was moderated by Tongtong Luo, NSYCC Social Chair. The panelists shared their career choices and motivation; although their starting points were all in chemistry or biology, they found their careers in totally different ways. The topic of mentors was a common theme during the Career Symposium, as it was also discussed during this panel. All the panelists determined that mentors are important, and seeking out a mentor can be as simple as reaching out to anyone who may be able to provide help or guidance for your desired career. Another interesting question raised during the panel was what you would say to your younger self. The panelists encouraged everyone to try anything that they want to do and not to be afraid of failure. They mentioned that even if someone doesn’t find out what they don’t want, which is another valuable lesson.

The academic careers panel featured Dr. Elizabeth Draganova (Tufts University and NSYCC Immediate Past-Chair), Dr. Mariam Ismail (Simmons University), Dr. Sossina Haile (Northwestern University), and David Manke (UMass Dartmouth) and was moderated by Klaudja Caushi, NSYCC Secretary and Publicity Chair. They discussed the many duties that a professor can take on, including research, mentoring, teaching, and administrative work. All panelists concluded that the work is demanding but very satisfying, and that having a good support group is key to achieving your goals as a professor. They also discussed the importance of publications in this career path, and the notable trend of more lecturing positions as opposed to tenure-track positions.

The success of the virtual Career Symposium hinged on the flexibility of the participants, panelists, and workshop leaders, as well as the adaptability of the NSYCC Executive Board to hold such an important event online during a pandemic. The NSYCC Executive Board would like to thank all who participated in the 2020 Virtual Fall Career Symposium.

For late breaking news, job postings and the latest meeting and event information please visit us at www.nesacs.org

Q. Exactly, how many awards and scholarships does NESACS sponsor?
A) One     b) Two     c) Many
www.nesacs.org/awards
September is usually a busy month. Start of a new semester for me, start of a new school year for my kindergartener, and of course, it is the final preparation month for National Chemistry Week (NCW). From designing volunteer t-shirts to ordering fun giveaways. From finalizing the hands-on activities to contacting volunteers, hoping against hope that we have enough for each museum. September used to be a truly stressful month.

Then, COVID hit.

High schools and colleges switched to hybrid or fully remote learning. Students and teachers have to navigate this new playing field and adapt. Our museum partners now faced significant reduction in visitor volume, tight operational budgets, and strict social distancing and hygiene protocols. They also have to evolve and adapt. ACS decided back in August to transition all NCW events to a virtual platform. The NESACS NCW annual events, the outreach program that allows our enthusiastic volunteers to share their passion for chemistry to the general public, to inspire the next generation of scientists, the very events that my son looks forward to every year suddenly can no longer be done in person. The well-oiled machine that I inherited six years ago also had to adapt.

Thank heavens for our great partners at Museum of Science, Boston (MOS) and Boston Children’s Museum (BCM). We are also very lucky to have a reliable group of regular guest educators, who really came through for us this year.

The theme for NCW 2020 was “Sticking with Chemistry”. Since NCW 2020 coincide with Massachusetts STEM week (Oct 19-23, 2020), both museums decided to run a week-long virtual celebration of chemistry. The events this year were also free for everyone, so people who previously might not have the means to visit the museums can now join in on the fun! Our virtual event at the MOS was geared more towards high school students. Our colleagues at the MOS organized guest educators to produce a series of livestreamed hands-on activities and podcasts. The hands-on activities allowed viewers to join in the action interactively. The podcasts tailored to a variety of different interests including an interview with Professor Bassam Shakhashiri about how to safely explore chemistry at home. The “Science in Action” series of hands-on activities showed visitors the science of slime and bioplastics; the solubility of chewing gum in peanut butter, and how to make a greener glue. Want to know about how chemistry applies in nature? Watch the Museum’s Live Animal Care Center staff as they introduce you to some wondrous animals with extra special sticky feet. Thinking about a career in science? Watch the “Ask a Scientist” livestream featuring four college students as they share their passion in science. The week-long MOS event was concluded with a Big Science Show by none other than the world-famous Professor Bassam Shakhashiri. Missed the MOS event this year? Fear not! All of the livestreamed video recordings are still available at (https://rb.gy/ilme0c) and you can listen to the podcasts here (https://www.mos.org/mos-at-home/pulsar-a-podcast) See? Virtual events have their advantages.

While the MOS event was geared towards high school students to young adults, the BCM events were certainly aiming for the younger audience. This year, our NCW events are incorporated into the CreatedBy e-festival organized by BCM. What is CreatedBy you ask? To use their words, “The CreatedBy e-Festival is a unique format for an inspirational show-and-tell of local creativity and brings together Boston’s technology innovators, designers, educators, tinkerers, hobbyists, engineers, artists, crafters, students, and more, and introduces them to thousands of adults and children.” Volunteers and museum staff submitted video contents for the CreatedBy e-festival.
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National Chemistry Week

Continued from page 9

e-festival. Out of the 28 CreatedBy videos, five were directly related to NCW 2020. You can check them out here: (http://createdbyfestival.org/videolibrary2020/).

All these virtual events are wonderful opportunities to reach a broad audience, especially when they are free to the general public. But surely NCW 2020 should be more than just podcasts and videos. Don’t we all have enough screen time already? What about true hands-on experience that is essential to discovery and science? NESACS set aside funding intended for the in-person events, so how can we do NCW 2020 justice? The answer lies once again with our strong partnership with the museums. As part of the CreatedBy e-festival, BCM was giving away free STEAM kits to Boston Public Schools teachers and families. The STEAM Kits have been created by BCM’s STEAM staff, using a proven pedagogy and allows students to be creative and self-expressive, all while building a foundation for future STEAM learning. Sounds awesome, right? It’s no wonder BCM received overwhelmingly positive response for the kits and were looking for sponsors to help fund the production. Their mission aligns well with our outreach program and NESACS was proud to be a Coppersmith level ($5,000) sponsor. All in all, our sponsorship yielded 82 STEAM kits. 50 kits are going to Dr. Martin Luther King Jr. K-8 School, and the remaining 32 kits are going to Michael J. Perkins school in South Boston. NESA CS also provided the NCW 2020 Celebrating Chemistry hands-on activity magazine for all the pre-existing kits. Including NESACS’s contribution, over 330 kits have been produced. BCM is still looking for sponsors, and we are waiting to hear our recipients’ feedback. Who knows? Perhaps we can forge another partnership with Chemists Celebrating Earth Day?

NESACS NCW events would not be complete without our illustrated poem contest! Congratulations to our Grade 3-5 Category Poem Contest Winner, Aahana Kapil from Montrose Primary School and our Grade 6-8 Category Poem Contest Winner Ashmita Prajapati, from Vassal Lane Upper School. Ashmita also won the second place in the National contest. Way to go Ashmita! Both winners received a $30 Amazon gift card, a NESACS winner certificate and an ACS souvenir.

NESACS NCW 2020 would not have been possible without our museum partners. A special shout out to Emily Hostetler and David Sittenfeld from the Museum of Science, Boston, and Alissa Daniels and Neil Tembulkar from the Boston Children’s Museum, who did all the heavy lifting. Of course, what makes NESACS NCW events truly awesome are our volun-
teers! A big thank you to Gisele Andree, Jessica Beard, Janie Butler, Charlotte Farquhar, Sarah Faulkner, Nate George, Connor Gomes, Maria Guzman, Cynthia Ibarra, Angela Lee, Amanuella Mengiste, Madi Morin, Vyshnavi Vennelakanti, Alexa Weindorf, Bryan Sears and his BC High Lab Rats Chemistry Club, and Girlstart. I would also like to thank the entire Board of NESACS for being so patient and supportive to our NCW program.

Here is hoping we will be back in person for NCW 2021 “Fast or Slow...Chemistry Makes It Go!”.

Illustrated Poem by Ashmita Prajapati, Grade 6-8 Category Poem Contest Winner & second place in the National contest

Illustrated poem by Aa-hana Kapil, Grade 3-5 Category Poem Contest Winner
Last winter (which seems like a lifetime ago), the NESACS medicinal chemistry seminar committee was putting the final touches on preparations for our annual “Advances in Chemical Sciences” symposium, which was scheduled for May 2020. When March rolled around, however, everything changed. It became apparent that the COVID-19 pandemic would make it impossible to hold a large indoor event in the intended time frame. We initially considered delaying until later in the year, but it soon became clear that there was just too much uncertainty to give us a high level of confidence in our ability to stage the symposium even in late 2020. (Subsequent events, as we all know, have validated our concerns!) Despite our disappointment, the committee was determined to find a way to bring high-quality presentations to the local medicinal and organic chemistry community. We quickly settled on a monthly webinar series, with one seminar for each session. Rather than charging for attendance, we’d do it for free! We chose to hold each seminar on the 2nd Thursday of the month, at 4 pm.

We were thrilled when Derek Lowe (Novartis) agreed to be our very first speaker. Derek’s long-running “In the Pipeline” blog has become required reading for anyone looking for in-depth yet highly accessible analysis of the latest scientific COVID news. Derek’s presentation on September 10th, entitled “Coronavirus Therapies: What’s Probably Coming, and What Probably Isn’t”, did not disappoint. He provided an outstanding high-level overview of the current state of the COVID-19 treatment and vaccine landscape, which concluded with a robust Q+A which lasted for over 30 minutes! And perhaps best of all, we had no technical issues!! (Special thanks go to Casi Leal from Sanofi, for her support and guidance on the optimal use of the Zoom webinar platform.)

Our second seminar speaker, on October 8th, was Rebecca Ruck (Merck), who presented “Enabling Technologies for the Development of Best Process.” She highlighted how her teams were able to generate efficient and green process chemistry synthesis routes for 3 key compounds in Merck’s development pipeline. She incorporated scientific successes in hot areas like biocatalysis, traditional catalysis, and flow chemistry and showed how Merck thinks about both cost-of-goods as well as environmental sustainability.

For our 3rd webinar, Atwood Cheung (Novartis) presented the medicinal chemistry story behind the identification of Icenticaftor, a novel potentiator of the cystic fibrosis CFTR Channel, with a focus on its use as a treatment for COPD.

Most recently, Nathan Fuller from Alkermes described his team’s success in identification of selective dual HDAC 1/2 inhibitors. A fascinating aspect of the presentation was the ability of the highlighted compounds to inhibit the HDAC’s only in the context of the CoREST complex, which distinguishes these compounds from other known HDAC inhibitors.

The series has now hit its stride, and we have an exciting series of diverse webinars planned through next spring. Planned speakers are Brian Lanman from Amgen (January 21st), Ed Ha from Angiex (February 11th), Sara Buhrlage from Dana-Farber Cancer Institute (March 11th), and Matthew Clark from X-Chem (May 13th).

As rewarding and successful as this webinar series has been, the committee has its attention focused on a return to an in-person symposium in the coming year. We have now targeted Nov. 5th, 2021 for our 10th annual “Advances in Chemical Sciences” symposium, (hopefully sufficient time for vaccination and herd immunity to take hold), and we’re in the process of building an outstanding lineup of speakers, to make up for our lost opportunity in 2020. We are looking forward to seeing everyone in person next year for what will be a truly momentous event! Until then, follow this link https://nesacs.org/medchem.html for more details about the ongoing webinar series!
IUPAC, organized the 2019 Northeastern Global Women’s Breakfast- Empowering Women in Chemistry. This event was a finalist for the Global Engagement Award for Local Sections sponsored by the International Activities Committee. This breakfast was held on February 12th, 2019, and was one of 200 hundred events over 50 countries taking place on that day. Two keynote speakers, Dr. Rebecca Ruck and Dr. Margaret Cho, were followed by a panel discussion to discuss how to encourage gender equality and handle issues such as work-life balance.

Finally, NESACS was also a finalist for the LSAC sponsored award for Outstanding Performance by a Local Section – Very Large Size Category. It was an honor for the Northeastern Section to be finalists for so many of the ChemLuminary awards this year. We appreciated the strong and creative programming we competed against in the final round that also prevented us from winning in any of these nine categories this year. However, NESACS Chair Anna Sromek is very happy with the performance of our section, saying “NESACS has successful programming that attracts a lot of interest and participation, and fantastic volunteers and it works very well for our section. This is really the most important aspect for us.” Congratulations to the 2019 ChemLuminary award winners!

We also whole-heartedly agree with Janet Bryant’s top 5 benefits of volunteering, with the importance of community ranking #1. Are you interested in hearing more about these committees and getting involved in these activities? Please visit NESACS.org to find out more and to get in contact with us!

Science can flourish only in an atmosphere of free speech.”
- Albert Einstein

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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/chemistry/colloquia.aspx

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

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**January 7**
Prof. Steven D. Townsend (Vanderbilt)
MIT, online, 4:00 pm

**January 14**
Prof. Mary p. Watson (Univ. Delaware)
*Cross-Couplings of Alkyl Amine and Alcohol Derivatives*
MIT, Online, 4:00 pm

**January 19**
Dr. Toby Nelson (Oklahoma state Univ.)
MIT, online, 4:00 pm

**January 21**
Prof. Steven Craig (Duke Univ.)
*Some simple concepts and their consequences in covalent mechanochemistry*
MIT, online, 4:00 pm

**January 27**
Prof. Emrah Altindis (BC)
BC, online, 4:00 pm

**January 28**
Prof. Robert Waymouth (Stanford)
MIT, online, 4:00 pm

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

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