Monthly Meeting
A Medicinal Chemistry Symposium at Takeda Oncology: “Art and Science of Hit Generation”

Vivian Walworth
In Memoriam - 1922–2016

20th Andrew H. Weinberg Memorial Lecture
The Birds of Buchenwald

By Leland L. Johnson, Jr.
Northeastern University

Department of Chemistry and Chemical Biology

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Fall courses begin Wednesday, September 7, 2016

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http://www.northeastern.edu/cos/chemistry/

For more information, please contact: Cara Shockley – Graduate Administrator c.shockley@northeastern.edu 617-373-2824
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Cover: (L-R) Jerry Jasinski (2016 NESACS Chair), Professor Timothy M. Swager (Massachusetts Institute of Technology and 2016 Esselen Award Recipient) and Gustavus John Esselen IV at the Esselen Award dinner and award presentation held at the Harvard Faculty Club and the Pfizer Lecture Hall on April 7, 2016. (Photo by Joel Laino).

Deadlines: October 2016 Issue: August 15, 2016
November 2016 Issue: September 15, 2016

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Editor: Michael P. Filosa, Ph.D., 18 Tamarack Road, Medfield, MA 02052 Email: filosam@verizon.net; Tel: 508-843-9070

Associate Editors: Myron S. Simon, 60 Seminary Ave. apt 272, Auburndale, MA 02466

Business Manager: Joshua Fine, Email: joshuafine@gmail.com

Advertising Manager: Vacant: contact Michael Filosa at admanger@nesacs.org

Calendar Coordinator: Xavier Herault, Email: xherault@outlook.com

Photographers: Morton Hoffman and James Phillips

Proofreaders: Donald O. Rickter, Morton Z. Hoffman, Carol Mulrooney

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

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Vivian Walworth
In Memoriam - 1922–2016
By John and Mary McCann

Reprinted with permission from the Society of Imaging Science and Technology (IS&T), from The Reporter, “Remembering Vivian Walworth: 1922 – 2016, Founding Member of IS&T, President, Editor, Scientist,” vol. 31, issue #2 (April-June 2016).

Vivian Walworth was a Founding member in 1947 of the Society of Photographic Scientists and Engineers, now Imaging Science and Technology (IS&T). She served our Society in many ways for 69 years. She had planned to attend the 2016 EI meeting in San Francisco. She passed away on March 29, 2016.

She served IS&T on its Board of Directors, and was President from 1981-1985. She was the editor of the Journal of Imaging Science and Technology from 1989-1996. She founded the IS&T Reporter, and was its editor for twenty-two years. A generation of authors has benefited from her thoughtful discussions of content and her helpful suggestions for improving the clarity of their message.

For her engagement with the IS&T, she was elected a Fellow of the Society 1987, Honorary Member 2001, and received the rare President’s Citation in 1988 and in 2009; Senior Member 1974; Service Award 1966.

Vivian led Polaroid’s research on silver halide emulsions from 1961 until she retired in 1985 as the Senior Manager for Photosensitive Materials. Vivian interacted with Ansel Adams and John Sexton, Polaroid consultants, on many photographic projects. She was Polaroid’s scientific interface with Wolf Berg and J. W. Mitchel, international experts in emulation research. Her lab provided tailored emulsions for the new Polaroid instant films then under development, and served as a resource for the company’s emulation pilot and production plants. Her work at Polaroid included research and development of polarizers, 3D imaging processes, photosensitive materials and photomicrography. Her 28 Patents reflect her contributions in these fields.

Her laboratory provided special support for Polavision, Polaroid’s unique instant additive color motion picture film. Unlike most Polaroid film systems that stripped the developed emulsion off the final print, this system left the entire emulsion in place on the movie film. The change in optical density from projected white to projected black was the result of changes in silver covering power. Unlike most silver images, the entire image had a constant amount of silver. Whites were made by compact chemically developed silver, while blacks were made of diffuse, high-covering power silver. Although Polavision was not a commercial success, the emulsion technology was remarkable.

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Monthly Meeting

The 962nd Meeting of the Northeastern Section of the American Chemical Society

A Medicinal Chemistry Symposium
“Art and Science of Hit Generation”

Thursday, September 8, 2016
Takeda Oncology
40 Landsdowne Street, Cambridge, MA 02139

For updated information please see the NESACS website, www.nesacs.org

3:00 pm Refreshments
3:15 pm Welcome
3:20 pm Introductory Remarks

Confirmed Speakers
Alan Rigby, CSO, Warp Drive Bio, Cambridge, MA
Yun Ding, Manager Discovery Chemistry, GlaxoSmithKline, ELT-Boston, Waltham, MA
Anne Mai Wasserman, Merck Research Laboratory, Boston, MA
Craig Blain, RA Pharmaceuticals, Cambridge, MA

6:00 pm Social Hour
6:45 pm Dinner
7:30 pm Keynote Presentation

YOU MUST REGISTER IN ADVANCE TO ATTEND THE SYMPOSIUM. THERE IS NO REGISTRATION FEE TO ATTEND THE SYMPOSIUM. DINNER RESERVATIONS ARE REQUIRED. THE PUBLIC IS INVITED

Dinner reservations should be made no later than noon, Thursday, September 1, 2016. Reservations are to be made using PayPal: http://www.acssymposium.com/medchem-paypal.html. Select pay with credit or debit card option and follow the additional instructions on the page. Members, $30; Non-members, $35; Retirees, $20; Students, $10. Reservations for new members and for additional information contact the administrative coordinator, Anna Singer at secretary@nesacs.org (preferred) or at (781)-272-1966, 9am-6pm. Please do not call after hours. Reservations not cancelled at least 24 hours in advance must be paid.

Directions to Takeda: Use the following address for your GPS: 40 Landsdowne St, Cambridge, MA 02139

Save the date!

15th Annual Undergraduate Symposium on Sustainability and the Environment

Saturday, November 19, 2016
9:00 AM – 3:00 PM
Bridgewater State University
Dana Mohler-Faria Science and Math Center

Please join us at the only symposium dedicated to environmental research and sustainability projects that address these issues from a campus, regional, national, or global perspective. Graduate, undergraduate and high school student posters (including completed, in progress, and proposed work) in all environmental disciplines are welcome. Please email Ed Brush (ebrush@bridgew.edu) to add your name to our email distribution list.

A formal “Call for Abstracts” will be sent electronically in late September.

Call for Nominations, 2016 Richards Medal Award

The ACS Northeastern Section (NESACS) is soliciting nominations for the 2016 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 2014 Award was presented to Professor Harry B. Gray of the California Institute of Technology.

Nomination packages, consisting of a brief (no more than 5 pages) curriculum vitae for the nominee, a clear and concise (no more than 2 pages) nomination continued on page 11
The Gustavus John Esselen Award for Chemistry in the Public Interest

The Northeastern Section of the American Chemical Society (NESACS) is inviting nominations for its prestigious Gustavus John Esselen Award for Chemistry in the Public Interest. This award is given annually to a chemical scientist, whose scientific and technical work has contributed to the public well-being and has thereby communicated the positive values of the chemical profession. The significance of this work should have become apparent within the five years preceding nomination. The awardee shall be a living resident of the United States or Canada at the time of the nomination.

There is no limitation to the field of chemistry. The selection committee focuses on the general public recognition of the work, as well as its scientific/technical significance.

The Award consists of a bronze medal and the sum of $5,000. Travel expenses incidental to the conferring of the award will be reimbursed. The award will be presented at the April 2017 meeting of the Section. The Awardee is expected to deliver an address on the subject of the work for which the honor is conferred, or for work in progress which is also directed toward chemistry in the public interest.

Nominations should be submitted as a single pdf file including: 1) a letter signed by the primary sponsor with a description of the nominee’s work recognized as making a major contribution to the public welfare and as communicating positive values of the chemical profession, plus the names of two co-sponsors; 2) short supporting co-sponsor statements; 3) the nominee’s professional biography including a list of no more than ten of the nominee’s publications selected for their pertinence to the work nominated for recognition; and 4) copies of popular and technical press news or feature articles indicative of public benefit and interest. Further information is available at www.nesacs.org.

Nominations Are Due October 15, 2016 to karl@amgen.com with cc to JPiperGrady@gmail.com. Award recipients will be notified by February 1, 2017.

Inquiries may be directed to the above or to Dr. Karl Hansen, Tel. (617) 417-7147 or Jeananne Piper Grady, Tel. (617) 620-8315. Address: 11 Thaxter St., Hingham, MA 02043.

The Younger Chemists Committee and the Education Committee of the Northeastern Section of the American Chemical Society (NESACS, www.nesacs.org) invite applications from undergraduate and graduate students of chemistry, biochemistry, and chemical engineering (including materials science) at colleges and universities within the Northeastern Section who are currently engaged in original research to spend a week in Germany as the guests of the Jungchemikerforum (Young Chemists Committee; JCF) of the Gesellschaft Deutscher Chemiker (German Chemical Society; GDCh). The exchange group will consist of up to 12 students and a number of faculty and industrial representatives.

The trip to Germany will start with overnight flight from Boston on Saturday, March 25; return to Boston will be on Sunday, April 2. The visit will be the JCF Mainz-Wiesbaden spring student chemistry research conference (Fruehjahrssymposium) in Mainz, taking place Wednesday-Saturday, March 29-April 1, which will provide the opportunity for all delegates to engage in extensive networking with German and hundreds of International students, to take part in discussions focused on research, careers, education, and international opportunities in chemistry and related fields. The activities for the first part of the week will include industrial, academic, scientific, and cultural excursions in and around Mainz and Frankfurt. Each student representative from NESACS will be expected to give a poster or oral presentation on his/her research at the Fruehjahrssymposium and back in the Boston area at the Northeast Student Chemistry Research Conference (NSCRC) in April 2017. Air travel costs will be provided by NESACS, while the GDCh will cover ground transfers and accommodations while we are in Germany. A working knowledge of German, while useful, will not be required; the language of the Fruehjahrssymposium and the other events will be English.

Application forms will be available at the NSYCC (www.nsycc.org) and NESACS (www.nesacs.org) on or about September 15, 2016. When applying, the following material must be submitted electronically using the electronic application form: 1) the abstract of the presentation to be made at the Fruehjahrssymposium and the NSCRC; 2) an essay on the relevance of the exchange to your professional goals; 3) A letter of recommendation from your faculty research supervisor that supports your application. In addition, your faculty research advisor must certify that you are currently engaged in original research under her/his supervision, and that s/he gives you permission to be absent from the research laboratory for the period March 25-April 2, 2017; 4) approval from your supervisor and the chair of your department for your absence from classes, the research laboratory, and other related responsibilities. Members of the German Exchange Steering Committee will interview program finalists.

Prospective applicants who may be planning on attending the Spring ACS National Meeting and Exposition in San Francisco should note that the ACS meeting will take place immediately following the trip to Mainz, which may make it difficult for you to attend the ACS meeting. Applications are being accepted from students at colleges and universities within the NESACS geographic area, which comprises all of New Hampshire and the following counties in eastern Massachusetts: Barnstable,
The mission of the Andrew H. Weinberg Annual Memorial Fund is to bring together researchers from the field of chemotherapy development and the medical community in an annual symposium to create and foster an environment for cooperative synergy for inspiring and developing new concepts in pediatric cancer research and treatment.

Wednesday, September 28, 2016
4:00 pm – 5:00 pm
Yawkey Conference Center, Dana-Farber Cancer Institute

Mignon Lee-Cheun Loh, MD
Benioff Professor of Clinical Pediatrics and Chief of Pediatric Hematology/Oncology, The University of California, San Francisco Benioff Children’s Hospital

“New Genomic and Immunotherapeutic Approaches to Childhood, Adolescent, and Young Adult ALL—What’s Next”

Complimentary parking in the Yawkey Garage, located on Jimmy Fund Way

Contact: Tracey Cook, M.A.: 617-632-4450 tracey_cook@dfci.harvard.edu

The lecture will be available online at the following link:
video.dfcionline.org/accordent/WeinbergSymposium092816

Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, and Suffolk.

Students interested in learning more about the German Exchange Program should attend the September 8, 2016 and/or October 13, 2016 meetings of NESACS. There will be representatives from the Steering Committee at each meeting to answer your questions. To register for monthly meetings, please visit http://acssymposium.com/paypal.html.

For more information about the program or the application process, contact Leeland Johnson, Chair of the German Exchange Steering Committee, at ljjohnson@theconditasgroup.com.

Deadline for electronic receipt of applications: Tuesday, November 1, 2016, at 5:00 p.m.

Eduated at Bryn Mawr College, Dr. Loh graduated cum laude with a major in art history prior to entering medical school at Columbia University of College of Physicians and Surgeons. She was recruited to UCSF in 1999 after completing her residency and fellowship training at Harvard Medical School, and was promoted to associate professor of clinical pediatrics in 2007 and to full professor in 2011. Dr. Loh is nationally and internationally recognized for her expertise and novel contributions in two childhood blood cancers: acute lymphoblastic leukemia (ALL) and juvenile myelomonocytic leukemia (JMML). Dr. Loh currently serves as vice chair of biology for the ALL committee of the Children’s Oncology Group (COG). She has served as study co-chair for AALL03B1, which is the classification of acute lymphoblastic leukemia trial for the COG, and represents the largest risk stratification trial in the history of pediatric leukemia research, having enrolled over 11,000 children diagnosed with ALL since 2004. Together with her co-chair, Dr. Loh reviews the clinical features of each child enrolled at diagnosis, leukemia genetics, and early response to therapy, and renders a risk assign-
The Birds of Buchenwald

By Leland L. Johnson, Jr.

I’ve contemplated writing and submitting this article since the German Exchange group from NESACS visited Buchenwald during our exchange to Jena back in March 2014. I’ve started and stopped writing this piece in my office, on airplanes while traveling, while in coffee shops or hotels in Boston, San Francisco, San Diego, Los Angeles, Houston, Charlotte, Fort Myers, Tampa, Orlando, Louisville, Puerto Rico, Mexico, Germany, and Caribbean spots.

I arrived in Frankfurt several days before the rest of the group in order to carry out alliance and joint venture discussions on behalf of the clients of my company, Conditas. Those potential partners are, and were, located in valley of the Main River. After I acquired my rental car, I headed for my destination, where I found a quiet cemetery (Friedhof Fechenheim) on the western bank of the Main, shrouded with an early morning fog. I walked and contemplated my next 11 or so days in Germany and Czech Republic.

I listened. I heard birds. I am not an ornithologist. I am not a bird watcher. I am an admirer of birds. The songs of the birds added extra tranquility to this memorial to thousands. The meetings went well, and in a few days, I would be in Prague.

Early on the morning I was to depart Prague to visit the family of a chemist I met during the German Exchange in 2006, I had the pleasure of ascending the streets around Prague Castle. Around 5 am, I couldn’t sleep, so I walked the often noisy and crowded streets: Not that morning. Silence. Mostly.

Once again, there were birds singing to each other, welcoming the day to come, and many of those birds would be “early enough” to “get the worm.” Later that day, after training 70 miles to the east, I would be reacquainting myself with old friends and their growing family from Hradec Králové (Queen’s Castle) during my lovely stay. After Prague I joined the American Exchange delegation in Jena.

Months before, the German Chemical Society (GDCh)/NESACS hosts had planned for our delegation to visit the small city of Weimar, former capital of Thuringia, and the focal point of a great deal of German politics and culture, including residents Nietzsche, Goethe and Schiller, many composers, and famously, Walter Gropius and his design philosophy that would become the Bauhaus Movement.

I have opted to briefly describe our day trip from Jena to Weimar, endeavoring to describe a visit to Buchenwald with the group that I will not soon forget. Although I travelled with the group, my visit to the Memorial was quite solitary.

At 3 o’clock, Dr. Elisabeth Kapatsina (our GDCh host while in Jena) and I rallied 10 or 11 of the students on the 2014 Exchange to travel from Weimar to Buchenwald. It was Tuesday, March 25th, and we left Weimar in two taxi vans around 3:15 or so in the afternoon. We all knew the visitor center would close at 4:00, but it was decided that that particular facet of the visit to Buchenwald was less important than “going” to the site. And so we went.

Reflecting upon her amazing knowledge, poise and grace, Elisabeth was an amazing host on this day (and every day), knowing the range of reactions we might have upon our visit. Her willingness to accompany the group reflects one of the myriad reasons I strongly believe she is the right person to continue the legacy of the exchange program from the GDCh side of the equation.

In the vans from Weimar, we experienced a brief yet intense hailstorm that left rock salt-sized hailstones covering the shaded areas across the Buchenwald Memorial. The student
group and Elisabeth gathered outside the camp. I knew that I would be unable to accompany them. I left them to tour at their own pace and in their own way.

Emotionally charged reactions were in my future. I avoided contact with the group for personal reasons. I knew that my own understanding of what occurred at Buchenwald would magnify these reactions. I also knew that concentration camps under Nazi Germany were not reserved for those with a Jewish heritage, but I did feel a connection through my two children, who are Jewish, and through their mother whose great-grandfather was the only sibling to emigrate from Western Europe more than a hundred years ago. He was the sole survivor of his line. I knew that my children’s distant cousins were less numerous or non-existent due to the relentless collection, torture, and extermination of so many souls at Buchenwald and other camps under control of Germany before and during World War II.

I paused as I entered the camp to take a picture from the southern entrance. The sunlight defined the trees, though not beech trees, as “Buchenwald” (Beech Forest) would suggest.

The main entrance to the camp was visible in the distance (center of image) to the northwest along a barbed-wire enclosure. The shadows and sun caught my eye as I approached, and the scene seemed to correctly approximate my assumptions of what I might find just over the hill and through the gate. I entered at the southeast guardhouse and snapped another picture, peered at my map, curious to connect my own notions to the historical realities surrounding me.

I continued into the camp, walking to the far side of a building to witness the display of a work cart, one that cruelly facilitated the endless duties of those inmates physically able to push the carts. As it turns out, I framed the picture with the hanging post (left), a ten-foot tree trunk used to hang prisoners destined to spend time in a position much like crucifixion, on display for the masses, “usually resulting in dislocation of the shoulders” (Buchenwald Concentration Camp, Wallstein). Reading the provided captions near the work cart, I found that the cart was used as another final tool to work prisoners “to death,” and the building was in fact, the crematorium. I moved slowly down the slope of the camp, toward the north.

As I approached the Jewish Memorial, Block 22, thoughts of distant relatives entered my mind. I saw the countless stones, set upon the foundation of the Jewish barracks as a commemoration by visitors and as a remembrance of those who suffered there. I picked up three stones of different sizes

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to represent my family, crudely mimicking what I and others had done at the unveiling of the recently deceased matriarch at her headstone unveiling ceremony. I paused. I read the inscription. “So that the generation to come might know, the children, yet to be born, that they too might rise and declare to their children.” And so I promised myself to follow this solemn request at the appropriate time.

After taking that in, I moved to what seemed to be the center of the camp. I turned. I saw the NESACS student group descending northeastward toward the collection center where incoming inmates were processed. I would not visit the processing center.

I completed a 360-degree rotation, taking in the expanse of the inmate camp. Something caught my ear. I heard birds. Not blue jays or robins. Not distinctive bobwhites calling to each other. Meadowlarks? Definitely, I heard meadowlarks of some species. To my knowledge, no live trees remained within the MAIN camp enclosure, so these birds were singing from the edge of the camp, hundreds of meters from where I stood. From that point on, there was a bit of peace on my path. Above the noise of the gravel beneath my feet, I heard the song of the meadowlarks. These were the birds of Buchenwald.

I felt a bit of comfort as I descended north into a glade known as “the little camp.” Having two children (then) under six years old, I was quickly crushed to read of the horrors the children and the sick endured in this tiny portion of the camp. Overcrowding and wretched conditions in the little camp usually meant quick, but agonizing death to those who were sent there from the main camp. I was compelled to stay, to study the grounds, to read the walls. To remember. There were collections of rusted cooking sheets, pots, broken ceramic plates, cups, bowls, utensils, and other recovered artifacts from the camp. The memorial that has been set up within the camp is very fitting, remembering all nationalities and all of the known major work camps and extermination camps from that time.

I was compelled to look around this opening on the edge of the forest. Nearly surrounded by trees, this opening provided protection for the birds, and they sang in the little camp. I ascended the path back to the main inmate area.

As I left the little camp, one of the students approached. We spoke for a moment and parted ways. He rejoined the group. I did not.

In the Northwest corner of the camp, there was a single, restored inmate block, so I walked around the building. The windows were more translucent than I would have liked, but it seemed to fit the historical nature of the site. There were bunks and dirt floors with tools for renovations ongoing around and within the structure.

After the barracks, I headed up the hill to the Soviet memorial to the many Communists that died and were killed in Buchenwald; a prominent memorial at the site as Buchenwald and Weimar are in what was East Germany. I could not read the text but I knew what was there in stone. I looked again over the expanse of the camp, toward the east, the largest building, the processing center, and further to the right. I saw basalt markers between the Communist memorial and the southeast entrance, so I went over to read.

When I arrived, I read that this was the memorial to the Roma and Sinti (“Gypsy”) victims of the Holocaust. I found scores of pillars of basalt to be a part of this memorial. Close by, a solitary individual, I imagine him to have been much like me, was mourning those who were lost. I left this stranger behind in his grief.

I then decided to walk along the barbed wire fence along the south of the camp. I approached the main gate, walked around the inmates’ canteen, and knew that my time at Buchenwald was coming to an end.

View to the NW, into the little camp (l). View to the SE, from the bottom of the little camp (r).
2016 Election Results

The 2016 NESACS Nominating Committee would like to announce the results of the 2016 NESACS election, for terms beginning in 2017, as follows:

**Chair-Elect Total Winner**
- Mindy Levine 190 X
- Mukund Chorghade 90

**Treasurer Total Winner**
- Ashis Saha 238 X

**Trustee Total Winner**
- Dorothy J. Phillips 171 X
- Robert Lichter 105

**Councilor (C)/Alternate Councilor (A)**
- Thomas R. Gilbert 205 C
- Mary Jane Shultz 188 C
- Michael Singer 187 C
- Lisa Marcaurelle 178 C
- Marietta Schwartz 173 C
- Leland L. Johnson, Jr. 172 A
- Mary A. Mahaney 163 A
- Jerry P. Jasinski 154 A
- Sofia Santos 147 A
- Patrick M. Gordon 146 A
- Robert Lichter 143
- Sonja Strah-Pleynet 142
- Mukund S. Chorghade 138
- Raj (SB) Rajur 122
- Raymond E. Borg 119
- Kenneth Mattes 116
- R. Christian (Chris) Moreton 110
- Ajay Purohit 107

**Director-at-Large Total Winner**
- Michael Filosa 131 X
- David Harris 119 X
- John Neumeyer 116
- James Phillips 92
- Myron S. Simon 54

**Nominating Committee Total Winner**
- Sophia Su 152 X
- Thomas R. Gilbert 149 X
- Mary Jane Shultz 145
- James Phillips 82

**Norris Award Committee Total Winner**
- George O’Doherty 158 X
- R. Christian (Chris) Moreton 120 X
- Samuel Pazicni 116
- Ajay Purohit 91

**Total Ballots 286**

The tellers were John Burke, Brian Gerstenberger, Katherine Lee, Frank Lovering, Andrew Scholte, Anna Sromek, John Williams and Christoph Zapf.

Thank you to all of the candidates and to all who voted in this election. We offer our sincere apologies to Carol Mulrooney, whose name was mistakenly omitted from the ballot.

**2016 NESACS Nominating Committee**
- Katherine Lee, Chair, John Burke, Andrew Scholte, Anna Sromek, John Williams

**Richards Nominations**

Continued from page 5

letter that outlines the candidate’s “conspicuous achievements in chemistry” on which the nomination is based, and an optional one-page supporting letter, should be submitted electronically as a single PDF file to Anna Singer <secretary@nesacs.org>, NESACS Administrative Secretary, by October 31, 2016. The award will be presented on Thursday, March 23, 2017.

For more information, see <http://www.nesacs.org/awards_richards-medal.html> or contact the Chair of the 2016 Richards Medal Award Committee, Jerry Jasinski <jjasinsk@keene.edu>.

Nominations must be received by October 31, 2016.

Q. Exactly, how many awards and scholarships does NESACS sponsor?
   A) One  b) Two  c) Many

www.nesacs.org/awards
Dr. Loh Biography

Continued from page 7

These patients at diagnosis have provided additional rich resources for Dr. Loh and her colleagues to analyze for additional abnormalities that will provide new insights into the causes of this most common cancer of childhood. She coordinates a large number of these studies and is widely recognized for her ability to promote productive and accurate high profile collaborations in the leukemia community. For instance, together with the chair of the ALL committee, Dr. Stephen Hunger, Dr. Loh assembled a group of senior investigators that successfully applied for a two-year Grand Opportunity grant, which was part of the American Recovery and Reinvestment Act passed by President Obama in 2009.

Dr. Loh also conducts laboratory research and has made seminal contributions to unraveling the genetics of a deadly leukemia, juvenile myelomonocytic leukemia. Though this is a relatively rare disease, it is nonetheless nearly universally fatal unless these young patients receive a bone marrow transplant. Dr. Loh has identified at least two new genes that are mutated in this disorder, with the most recent discovery extending beyond JMML. The recent discovery of inherited mutations in a gene called CBL that predisposes families and affected children to developmental phenotypes (learning delay, hearing loss, poor growth) as well as cancer, are a breakthrough in human disease. This observation was initiated through old-fashioned detective work and a passion for listening to what patients “tell” us, either through their symptoms or words or family histories with the “a-ha” moment being realized with the “a-ha” moment being realized through harnessing sophisticated genomic technologies on a simple set of blood samples. Dr. Loh has published many papers in collaboration with international investigators and has served on the board of directors of a family advocacy group, the JMML Foundation. Dr. Loh is also interested in how the genetic alterations described in this disorder lead to faulty wiring within cancer cells, and her laboratory has developed a keen expertise in harnessing the latest technology, phosphoflow cytometry, to answer these questions.
Nucleus Advertising Rates

Main Section Rates

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Cover Rates

| Cover II, III | $1010 | 890 | 810 | 730 |

Cover IV Check for Availability

Business Card Rate:

1/24 Page Horizontal
Nine Issues Prepaid: $660

Non-Profit Rates
Non-profit institutional ads may be discounted 10%

The print issue of the Nucleus is black and white, the web issue is full color. Ads should be submitted as high resolution graphics: 300 dpi or greater as TIF, PDF or JPG files.

Productions charges should be minimal if an acceptable TIF, PDF or JPG is submitted or if the information in the advertisement is easily laid out and formatted.

The closing date for confirmation of placement in an issue is six weeks prior to the month of issue. That is, August 15th for the October issue, September 15th for the November issue and so on. Final ad copy is due within 5 days of the confirmation date.

For any communications related to placing advertisements in the Nucleus please contact the Nucleus Business Manager, Joshua Fine at joshuamfine@gmail.com or the Nucleus Editor, Michael Filosa at filosam@verizon.net or by telephone at 508-843-9070.

THE COMMITTEE ON CHEMICAL ABSTRACTS (CCAS) WANTS YOUR FEEDBACK

Visit our page on ACS Network: https://communities.acs.org/groups/chemical-abstracts-service-committee or contact Michael Filosa with any suggestions at filosam@verizon.net

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Birds of Buchenwald

Continued from page 10

Buchenwald was coming to a close. I could recognize NESACS students who had already exited the inmate camp, so I decided to take one last look around. No picture…just the memories.

As I look back on that surreal afternoon in March, I want to thank NESACS for sending me to Germany, and to thank the overwhelming majority of students on the trip who also visited Buchenwald. The tour allowed each of us to experience, in our own ways, this memorial to history. We have all read about the Holocaust, and heard about it, and perhaps we have visited local memorials to that dark part of human history…this allowed me to see it for myself. And I have been truly affected.

The peace I took from Buchenwald was this: As more and more people visit these sites, and witness the atrocities of a small part in the history of Germany, it will be less likely that the world would allow something like this to happen again. I will remember the trip to Germany, I will remember the birds offering their songs to me while I walked, and I will remember Buchenwald.

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Northeastern University
Bouvé College of Health Sciences and College of Science
## 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:
- http://www.bc.edu/schools/cas/chemistry/seminars.html
- http://www.bu.edu/chemistry/seminars/
- http://www.brandeis.edu/departments/chemistry/events/index.html
- http://chemistry.harvard.edu/calendar/upcoming
- http://www.northeastern.edu/cos/chemistry/events-2/
- http://chemistry.mit.edu/events/all
- http://chem.tufts.edu/seminars.html
- http://www.chem.umb.edu
- http://www.umassd.edu/cas/chemistry/
- http://www.umn.edu/chemistry/events

### August 19
- **Prof. Walter Thiel** (Max-Planck-Institut fuer Kohlenforschung)
  - Harvard, Pfizer Lecture Hall  4:15 pm

### September 8
- **Prof. Kyoko Nozaki** (University of Tokyo)
  - MIT, Room 6-120  4:00 pm
- **Prof. Dean Toste** (UCal-Berkeley)
  - Boston College, Merkert 130  4:00 pm
- **Dr. Jay Keasling** (Lawrence Berkeley Laboratory)
  - Harvard, Pfizer Lecture Hall  4:15 pm

### September 9
- **Prof. Kyoko Nozaki** (University of Tokyo)
  - MIT, Room 6-120  4:00 pm
- **Prof. Masakatsu Shibasacki** (Microbial Chemistry Research Foundation)
  - Boston College, Merkert 130  4:00 pm

### September 13
- **Prof. Melanie Sanford** (Michigan)
  - Harvard, Pfizer Lecture Hall  4:15 pm

### September 14
- **Prof. Neil Kelleher** (Northwestern)
  - Northeastern, 129 Hurtig Hall  12:00 pm

### September 15
- **Prof. Donna Blackmond** (Scripps) & **Dr. Yves Ducharme** (Merck)
  - MIT, Room 6-120  4:00 pm
- **Prof. Thomas W. Hamann** (Michigan State)
  - Boston College, Merkert 130  4:00 pm

### September 19
- **Prof. Karen Wooley** (Texas A&M)
  - Boston College, Merkert 130  4:00 pm

### September 20
- **Prof. Bradley Penetrate** (MIT)
  - Northeastern, 129 Hurtig Hall  12:00 pm

### September 22
- **Prof. Hanadi Sleiman** (McGill University)
  - MIT, Room 6-120  4:00 pm

### September 27
- **Prof. Bill DeGrado** (UCSF)
  - Boston College, Merkert 130  4:00 pm

### September 28
- **Prof. Shirley Liu** (Dana-Farber Cancer Institute)
  - “Using Epigenetic Profiling and CRISPR Screen to Study Cancer Progression and Drug Response”
  - Northeastern, 129 Hurtig Hall  12:00 pm

### September 29
- **Prof. Yogesh Surendranath** (MIT)
  - Boston College, Merkert 130  4:00 pm

**Notices for The Nucleus Calendar of Seminars should be sent to:**
- Xavier Herault, email: xherault(at)outlook.com

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**Looking for seminars in the Boston area?**
Check out the NESACS Calendar
http://www.nesacs.org/seminars

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