BIOLOGYCURRENTS

2017 | THE QUEENS COLLEGE BIOLOGY ALUMNI NEWSLETTER | VOLUME 20, NO. 1

Biology Department Undergoes a Self-Study

Daniel Weinstein

The concept of a "Self-Study" is likely unfamiliar to most of our alumni but this is actually the third time the Department has undertaken this very valuable process. The Middle States Association (MSA) of Colleges and Schools, which includes Queens College, requires a regularly scheduled Self-Study of each of the College's departments and the current Biology Department Self-Study is part of this process. The MSA is a voluntary, peer-based, non-profit association charged with the evaluation of public and private colleges and universities in the Mid-Atlantic United States, of which New York State is one. (Other associations similarly evaluate the remaining 8 regions of the United States). Successful completion of their evaluation allows a college/university to say that it is "accredited". Queens College regularly receives high marks from the MSA at each 10-year full review.

A departmental Self-Study is a two-step process: the department writes a Self-Study report after which reviewers, selected from outside of CUNY, are invited to the campus to evaluate how well the department is meeting the educational needs of its students.

In 2017, the Department of Biology submitted its latest self-study to the Division of Mathematics and the Natural Sciences and Queens College. Professor Cathy Savage-Dunn coordinated the writing of the document, which covered all aspects of the department's educational and research missions. The training, field of expertise, and research record of Biology faculty was reviewed. Curriculum was assessed, including course offerings and degree requirements for the Biology major/minor, master's programs, and other degrees. Student enrollment in the department's classes was reviewed in detail, including changes that have occurred over the past years. The document also contained overviews of other department functions and resources: advisement, special programs and grants, student-based independent research, space and equipment.

Perhaps the most valuable aspect of a self-study is that it enables a department to discuss potential crises and existing or impending weaknesses collaboratively and develop strategies to address these problems before they negatively affect students' educational experience. The text below outlines the discussion in the self-study, as well as reviewers' commentary.

The students enrolled in Biology courses are a key departmental strength. Our students come from highly diverse backgrounds, representative of Queens County as a whole. Many are the first in their family to attend college and envision a college education as their pathway to the American dream. They are dedicated, hard-working, and goal oriented. The self-study reports that from Spring 2003 to Fall 2016, enrollment in Biology courses increased 80%, from 1,074 to 1,939 students per semester (Self-Study Figure 3).

The number of Biology graduates increased from 30 in 2007 to 100 in 2016 (Self-Study Figure 6, page 2). The number of master's degrees in Biology awarded in the early 2000s rarely exceeded 1 or 2 per year. While 15 master's degrees were awarded in 2013, the average since 2010 has been 4 to 6.

Scrutiny of these statistics reveals valuable insights. Most of the students enrolled in Biology courses do not graduate with a Biology degree. Additionally, Biology has seen a significant enrollment surge in courses that serve majors in other science departments: Family, Nutrition, and Exercise Sciences (FNES) and Neuroscience–Psychology. This dramatic growth in enrollment, particularly in gateway to major-level courses,

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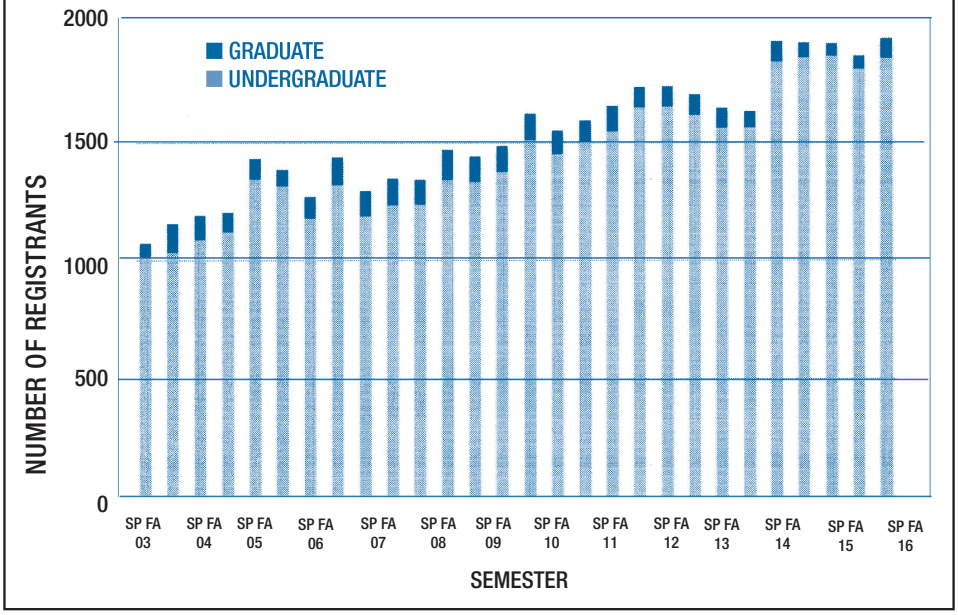
Figure 3: Number of Students Registered in Biology Courses / Spring 2003—Fall 2016



creates staffing and space challenges for Biology. Faculty members are increasingly drawn into teaching entry-level courses and away from offering courses in their areas of expertise. Moreover, laboratory sections are increasingly taught by adjuncts, leading to administrative difficulties and problems insuring uniformity of the classroom experience.

A weakness identified by the department is faculty attrition, a problem exacerbated by rising enrollment. Through retirement, resignation, and death, Biology has lost five professorial-level faculty members since January 2011. Because of financial restrictions, the department has been allowed to hire only one tenure-track professor and one lecturer. This has had a major impact on several levels. The department lost expertise in certain fields; in conjunction, it has been severely limited in its ability to expand its curricular offerings and research into emerging areas of biological sciences. Reduced professorial numbers also threaten the ability to offer enough courses, some critical to completion of the major, without relying too heavily on adjunct faculty. Another consequence is that far too few faculty members are in the early stages of their academic and research careers, which affects research activity and grant funding.

Acting Dean of Math & Natural Sciences Susan Rotenberg, in consultation with the Biology Department, selected two external reviewers—Robert Prezant, provost of Southern Connecticut State University. and Philip Farabaugh, chair of Biology at the University of Maryland, Baltimore County. Both were given the department's self-study well in advance of their September 2017 campus visit. Provost Prezant and Professor Farabaugh spent two full days on campus. During that time, they talked to faculty members and student representatives, toured the department's teaching and research spaces, and

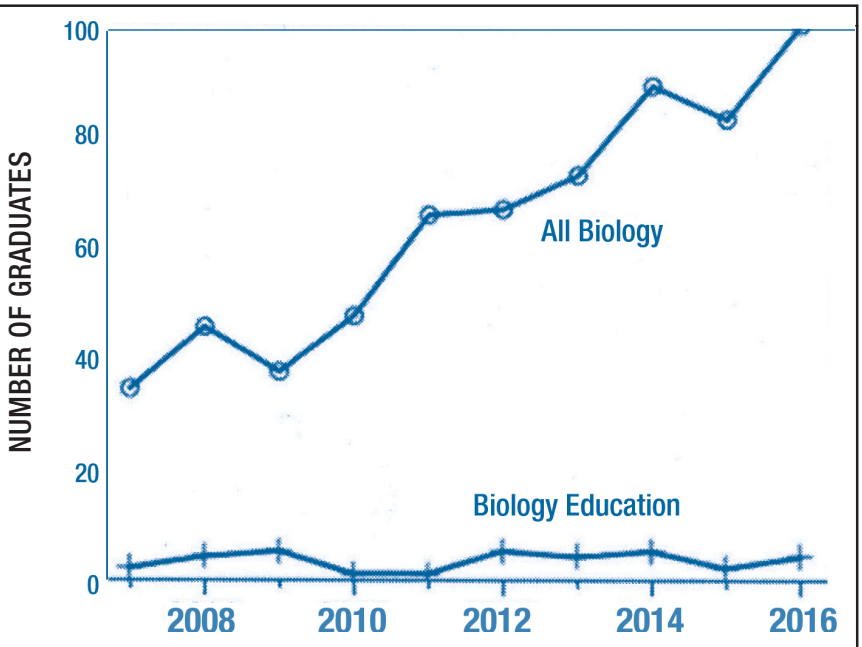


Figure 6: Increas in Biology Majors Graduating 2007—Fall 2016

met with members of the college administration.

This productive, occasionally eye-opening, review was followed by a written report, provided to the department in November 2017. Provost Prezant and Professor Farabaugh offered advice on everything from funding sources to curricular development. The departmental discussions stimulated by their suggestions were especially valuable; the department designed several initiatives to increase the number of students graduating with Biology degrees.

- Develop a Bachelor of Science degree
- Initiate a post-baccalaureate program for pre-health professionals
- Create a multidisciplinary Bachelor of Arts degree in Biology and Society for pre-health sciences students
- Deepen partnerships with community colleges
- Develop graduate programs in:
  - Genetic Counseling
  - Urban Conservation Ecology
  - Biotechnology

The final steps in the self-study process will take place next year. A response to the reviewers' report, drafted by the Personnel & Budget Committee, was approved by Dean Rotenberg and submitted to Queens College Provost Betsy Hendrey. The P&B Committee will meet with the administration to discuss the results of the self-study and the department's plans for the future. We look forward to sharing these plans with you in the 2018 issue of *Biology Currents* and eliciting your support to help the department move forward.

Dr. Daniel Weinstein
Chair of Biology

Student Highlights

Biology Department students have been doing great work and earning honors.

HISHAM ALRUBAYE (Dennehy lab), an undergraduate and member of the NIH Minority Access to Research Careers (MARC) program, won a First Place Poster Award for the poster he presented on his research at the Howard Hughes Medical Institute SEA-PHAGES Symposium. The presentation, "Dependency of bacteriophage lambda lysis time on host growth rate," was co-authored by Dr. Dennehy and students C. Urgiles[U], K. Ghushinga[D], and A. Singh. The poster was also presented at the Annual Biomedical Research Conference for Minority Students in Phoenix, Arizona.

JAMES CLARK (mentored by Savage-Dunn) was awarded a CUNY Dissertation Year fellowship.

ANNE HARRISON (Queens College Biology BA'17 – Lahti lab) will be joining the California Conservation Corps, working on their salmon recovery program.

YE JIN (mentored by Weinstein) successfully defended his dissertation, "The role of Pitx proteins in early *Xenopus* development," and was awarded a PhD from the Doctoral Program in Biology – Subprogram in Cell, Molecular, & Developmental Biology of the Graduate School of CUNY. Dr. Jin presented a poster on his research entitled "Pitx1 regulates cement gland development through activation of transcriptional targets and inhibition of BMP signaling" at the Society for Developmental Biology, Northeast Regional Meeting held at the Marine Biological Laboratory, Woods Hole, Massachusetts.

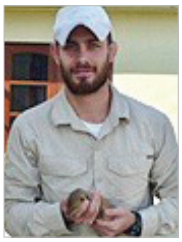
CHENGHUI JU (PhD '15 – mentored by Lahti) accepted a faculty position at Nanjing Forestry University in China.

KHALEDA KHAN (Queens College Biology BA '11), currently a student in the Biology Master's Program (Lahti lab), was hired as a full-time web developer for Reelio Inc., an Internet marketing service based in New York City.

UDAY MADAAN (mentored by Savage-Dunn) successfully defended his dissertation, "Body size regulation via BMP signaling in *C. elegans*," and was awarded a PhD from the Doctoral Program in Biology – Subprogram in Cell, Molecular, & Developmental Biology of the Graduate School of CUNY.

ANNA McPHERRAN (Queens College Biology BA '16 – Lahti lab) has joined the Ecology & Evolution doctoral program at Stonybrook University.

M. AARON OWEN (mentored by Lahti) successfully defended his dissertation, "Ecology, Evolution, and Sexual Selection in the Invasive, Globally Distributed Small Indian Mongoose (*Urva auropunctata*)," and was awarded a PhD by the Doctoral Program in Biology – Subprogram in Ecology, Evolution, & Behavior of the Graduate School of CUNY. Dr. Owen is now a data scientist for Major League Baseball.



Dr. Owen with his favorite mongoose

NICHOLAS J. PALMISANO (mentored by Meléndez) successfully defended his dissertation, "The recycling GTPase, RAB-10, regulates autophagy flux in *Caenorhabditis elegans*," and was awarded a PhD from the Doctoral Program in Biology – Subprogram in Cell, Molecular, & Developmental Biology of the Graduate School of CUNY. He also gave a talk, "The recycling endosome protein RAB-10 promotes autophagic flux and localization of the transmembrane protein ATG-9," at the North East Society for Developmental Biology meeting at the Marine Biological Laboratory, Woods Hole, Massachusetts.

CORINNA SINGLEMAN (mentored by Holtzman) successfully defended her dissertation, "Characterizing the impacts of contaminants on fish embryogenesis and revealing an alternate molecular mechanism of AhR mediated cardiac defects," and was awarded a PhD from the Doctoral Program in Biology – Subprogram in Ecology, Evolution, & Behavior of the Graduate School of CUNY. Using zebrafish, the fish model genetic organism, and Atlantic sturgeon, Dr. Singleman's research showed that toxins such as PCBs and TCDDs found in local waterways affect heart development of these animals. She also participated in the Macaulay Alumni Mentoring Program and is an active member in the Society of Environmental Toxicology and Chemistry's Career Development Committee and the Buddy System subcommittee. Her work focuses on ensuring that budding scientists have the best resources to succeed.

Dr. Singleman is currently a visiting assistant professor at Queens College and is assistant to the director for HIS (Hispanic Serving Institution) STEM (Science, Technology, Engineering, Mathematics) Course Redesign.

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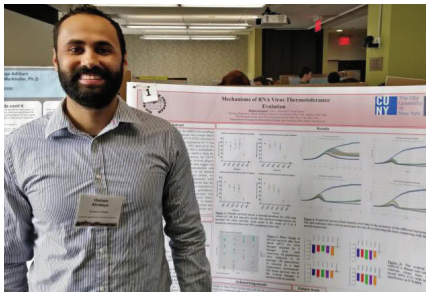
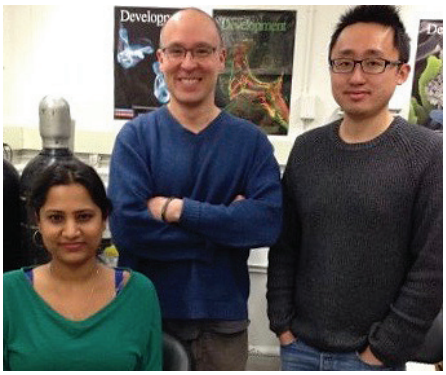


Hisham Alrubaye with one of his many poster presentations

Drs. Uday Madaan, Corinna Singleman, and Nicholas Palmisano (left to right)

Dr. Corinna Singleman in her element, the fish room

Student Highlights



Dr. Ye Jin and Dr. Sushma Teegala with their doctoral mentor, Professor Daniel Weinstein

SUSHMA TEEGALA (mentored by Weinstein) successfully defended her dissertation, "The role of T-box proteins in vertebrate germ layer formation and patterning," and was awarded a PhD from the Doctoral Program in Biology – Subprogram in Cell, Molecular, and Developmental Biology of the Graduate School of CUNY. Dr. Teegala presented a poster on her research entitled "Tbx2a is required for the suppression of mesendoderm during early *Xenopus* development" at the Regeneron Science to Medicine Forum in Tarrytown, New York.

NINA UZOIGWE, a Stuyvesant High School student working in the Meléndez lab, was accepted into seven Ivy League colleges. She is attending Yale University. More information about Nina can be found at https://bit.ly/2Jh385v and https://bit.ly/2Hibkpz.

Nina Uzoigwe at work in the Meléndez lab

CHRISTIAN VAN DEURS defended his thesis, "Nonhuman mammalian cultural behaviors and the animal cultures debate," and was awarded a Master's degree in Biology. Mr. Van Deurs is a science teacher in the New York City school system.

MASON YOUNGBLOOD (mentored by Lahti), a student in the Doctoral Program in Psychology of the Graduate School of CUNY, gave a talk entitled "Bibliometric analysis of the interdisciplinary field of cultural evolution" at the Inaugural Cultural Evolution Society Conference in Jena, Germany.

ALUMNI UPDATE 2017

We urge our readers to send us personal updates for the next issue of *Biology Currents.* The items in this issue were gleaned from college sources but, sadly, not from you, our alumni. If you enjoy reading this material, your fellow alums will also love to hear about what you have been doing. Here is how you can do it!

- Contact Dr. Michels via email (Corinne.Michels@qc.cuny.edu) and put "Biology alum" in the subject line. Indicate the year you graduated and, if you have a photo you would like to include, please send it as a jpeg attachment.
- Update the Office of Alumni Relations directly by visiting its Welcome page (https://bit.ly/2rNnUTa). You, too, can appear in the *QView* (the college's electronic newsletter), or the annual *Queens* magazine.

Interested in getting in touch with someone who appeared in Alumni Update? Contact Corinne Michels by email, as above, and she will forward your message.

In January 2017, the department held its annual Biology Symposium. Most of the speakers came from current Biology faculty and students, who discussed their research projects. For the first time this year, symposium organizers Nathalia Holtzman and Corinna Singleman invited two alums to give keynote addresses. **OLIVIER NOEL '11** gave a talk entitled, "The quest for personalized medicine: Linking startup to bench to bedside."

DR. PETER A. NOVICK, MA '08 / PHD '10 spoke on "Using bioinformatics to elucidate the evolutionary dynamics of rhomboid proteases in *Streptomycetes*." Below is an update on what they have been doing. Many of you will remember Dr. Novick as your lab or recitation instructor.

Forbes magazine named **OLIVIER NOEL '11** to its annual list of "30 Under 30" outstanding young entrepreneurs in the sciences for 2017. *Biology Currents* highlighted him in the 2014 issue (https://bit.ly/2IpnqxU). While an MD/PhD student at Penn State College of Medicine, Mr. Noel founded DNAsimple, a company that banks DNA samples from individuals—maintaining their confidentiality—and provides the samples to biomedical researchers. "Normally, it is an extremely expensive and very long process for researchers to get enough samples for studies," Mr. Noel says, adding that a typical study could require 30,000 to 100,000 participants.

Olivier Noel '11 presents DNAsimple to the panel of venture capitalists of the TV show *Shark Tank*.

DNAsimple's operations reflect its name: "We pay you for your spit, researchers get the samples they need, and we get paid for making it all happen." Noel explained all of this on network television when he presented his business plan to *Shark Tank*'s panel of venture capitalists. Billionaire panelist Mark Cuban was so impressed that he offered $200,000 for a 15 percent stake in the company, to which Mr. Noel agreed. To read more about his appearance on *Shark Tank*, check the following link (https://cnb.cx/2zWmz2B).

Mr. Noel's work as an entrepreneur has not slowed his progress toward a combined MD/PhD in Biochemistry and Molecular Genetics. His doctoral research involves identifying the genetics underlying the positive health effects of bariatric surgery and developing novel therapies to treat diabetic patients.

After completing a Bachelor's in Biology from the University of Delaware, Dr. **PETER A. NOVICK, MA '08 / PhD '10** came to Queens College Biology to carry out research on the fields of bioinformatics and genomics with-then Professor Stéphane Boissinot. Dr. Novick taught at Queens College while completing his Master's and PhD in the Subprogram in Ecology, Evolution, and Behavior at the Graduate School of CUNY. His research investigated the evolutionary dynamics and diversity of DNA-transposable elements of the green anole lizard. His work resulted in several publications in top-notch, peer-reviewed journals. Noteworthy among his findings is a demonstration of lateral transfer of transposable elements.

Upon receiving his doctorate in 2010, Dr. Novick was appointed Assistant Professor in the Biology and Geology Department of Queensborough Community College – CUNY, where he is currently a tenured Associate Professor. Among his several achievements at Queensborough was the development of a Bioinformatics course designed specifically for the college's Biotechnology Program. Dr. Novick also participated in the U.S. Department of Energy's Joint Genome Institute to annotate bacterial genomes. As a result, his research transitioned to bioinformatic analysis of bacterial genomes, work that he incorporates into undergraduate research projects in the courses he teaches.

Dr. Novick is an enthusiastic educator and utilizes alternative pedagogical strategies in his courses. He enriches his courses with service learning, writing-intensive components and the Queensborough Community College's Common Read program. Outside of the classroom, Dr. Novick mentors research students and runs a Summer Biotechnology Boot Camp for under-represented high school students, both funded by the NSF MSEIP program.

Dr. Peter Novick '10 with a few of his pets

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WE WANT TO HEAR FROM YOU!

Do you want to tell your fellow alums what you have been doing since graduation?

Send an email to Prof. Michels at **Corinne.Michels@qc.cuny.edu** and include **"Biology Alumni Update"** in the Subject line of your message.

ALUMNI UPDATE

Be as brief or lengthy as you want. Dr. Michels will maintain a listing of your email address and any other contact information that you provide in your message. If any of our readers wish to contact you, they should ask Dr. Michels in an email and she will forward their message to you. You can respond to them as you like. Please let Dr. Michels know whether you want your message to appear in **ALUMNI UPDATE**. Include the following information:

- Year of graduation
- Your message edited by you as you wish it to appear in print
- Any photos as jpeg files

Do you have a comment about what you have been reading in *Biology Currents?*

Send an email to Prof. Michels at **Corinne.Michels@qc.cuny.edu** and include **"Biology Alumni Comments"** in the Subject line of your message.

ALUMNI SPEAK OUT

Send an email to Prof. Michels at Corinne.Michels@qc.cuny.edu and include "**Biology Alumni Comments**" in the Subject line of your message. We are considering starting a new section entitled "**ALUMNI SPEAK OUT**." We want to know your thoughts about ***Biology Currents*** or what is happening in the Biology Department. Please let Dr. Michels know whether you want your message to appear in **ALUMNI SPEAK OUT**. Include the following information:

- Year of graduation
- Your message edited by you as you wish it to appear in print

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The Queens College Office of Institutional Advancement continued the *Professionals on Campus* program, bringing alumni to campus to speak with students interested in pursuing careers in medicine and health care. The three individuals highlighted below majored in Biology. You might remember them.

DR. HOWARD BRADNOCK, MD '83 is a gastroenterologist practicing in Hollis, New York. He received his medical degree from Wake Forest Medical School in Winston-Salem, North Carolina. Dr. Bradnock returned to New York to do a residency in Internal Medicine at the North Shore-Long Island Jewish Health System and then completed a Fellowship in Gastroenterology at the same institution. Dr. Bradnock has been in practice for over 20 years. He is affiliated with a number of local hospitals, including Franklin Hospital, North Shore Medical Center, and Long Island Jewish Hospital.

Dr. Howard Bradnock '83

MICHAEL J. FEDIDA, RPh MS '69 is a registered pharmacist (RPh). Following graduation from Queens College, he earned a BS in Pharmacy from Brooklyn College and a Master of Science in Pharmacy, Drug Information and Communications from Arnold & Marie Schwartz College of Pharmacy and Health Sciences at Long Island University.

Michael J. Fedida '69

Mr. Fedida served for over 30 years as a practicing pharmacist and owner, officer, and director of a number of retail pharmacies, including J&J Pharmacy and Classic Pharmacy of New Jersey, as well as Perfect Pharmacy and Phoster Pharmacy of New York. Because of his extensive experience in the "art and science of pharmacy" and the pharmaceutical industry, he was asked to serve on the Board of Directors and/or management teams of several pharmaceutical companies. Among these were Circa Pharmaceuticals, Inc., Watson Pharmaceuticals, Inc., Bradley Pharmaceuticals, Inc., Arbor Pharmaceuticals, Inc., Actavis Pharma, Inc., and Mystic Pharmaceuticals, Inc. Mr. Fedida worked on career development with the Hoffmann – La Roche sales force and as a sales training instructor for Bradley Pharmaceuticals.

Additionally, he is a member of Empire Blue Cross / Blue Shield Pharmacy & Therapeutics Committee, the Garden State Pharmacy Owners Association, the Alumni Association Board of Directors for the Arnold & Marie Schwartz College of Pharmacy and Health Sciences at Long Island University, and the American Pharmaceutical Association.

DR. HOWARD MITTY, MD '54 is a retired Professor of Radiology & Urology of Mount Sinai School of Medicine. He received his medical degree from the State University of New York Downstate Medical School. Dr. Mitty continued his medical training in New York City. He did an Internship at Mt. Sinai School of Medicine and a Residency at both Maimonides Medical Center and Mt. Sinai School of Medicine.

Dr. Howard Mitty '54

In 2000, Dr. Mitty received the Distinguished Radiologist Award from the New York Roentgen Society. He also is a recipient of the Jacobi Medallion from Mt. Sinai Medical School.

Eco Garden at Kiely Hall

FACULTY IN THE NEWS 2017

Professor Waldman receives the 2017 American Fisheries Society's 2017 Carl R. Sullivan Fishery Conservation Award.

PROFESSOR JOHN WALDMAN received the American Fisheries Society's 2017 Carl R. Sullivan Fishery Conservation Award (https://bit.ly/2wkdHmR). This prestigious award, known as the "Sully," is awarded annually to an individual or organization for outstanding contributions to the conservation of fishery resources.

Professor Waldman is the go-to person for opinions and articles relating to fish biology and conservation. This year he wrote two editorials that ran in national newspapers. "What JFK Fliers Owe Jamaica Bay Wildlife" appeared on the op-ed page of the January 7 *Daily News* (https://nydn.us/2jeWn7z). In that piece, Professor Waldman acknowledges the valuable economic benefits that John F. Kennedy Airport brings to our region, adding over $37 billion annually to the New York economy. Nonetheless, little funding goes to remediating the airport's considerable negative environmental impact on Jamaica Bay. During JFK's construction, landfill was "borrowed" from the bottom of the bay, creating deep holes with limited circulation and poor water quality. Every day, treated effluent containing over 26,000 pounds of nitrogen is released into the bay from four sewage treatment plants. Large areas in and around JFK were covered with asphalt during its development and expansion, resulting in significant loss of habitat for hundreds of species, including vulnerable diamondback terrapins and saltmarsh sparrows. Moreover, aircraft safety requires the killing of thousands of birds each year. Calling for corrective action, Professor Waldman says, "These salt marshes provide a nursery for fish, including many kinds that people like to catch and eat and thus creating jobs … while offering terrific opportunities to see wildlife from the A train."

In honor of Henry David Thoreau's 200th birthday, Professor Waldman wrote "Thoreau's Distressing Canoe Trip," an op-ed that appeared in the *New York Times* on July 12, 2017 (https://nyti.ms/2tOaTcW). The editorial discusses Thoreau's canoe trip in New Hampshire and Massachusetts, as described in his book, *A Week on the Concord and Merrimack Rivers*. During this excursion, Professor Waldman notes, Thoreau came to realize how dependent many fish species are on "clean and free-flowing water to swim upriver from the sea to spawn" and that "these fish even then were being stymied by dams." Thoreau's distress can be heard in his haunting question, "Who hears the fishes when they cry?" Professor Waldman addresses the many dams on America's rivers and the impact on fish habitat and reproduction in his recent book, *Running Silver*.

ASSOCIATE PROFESSOR JOHN DENNEHY was quoted in the article "Viruses Would Rather Jump to New Hosts than Evolve with Them" in *Quanta Magazine*, September 13, 2017 (https://bit.ly/2wu9pnF). The article was republished by *Wired* (https://bit.ly/2yjzdFl).

DISTINGUISHED PROFESSOR EMERITA CORINNE MICHELS, along with her husband Dr. Harold Michels, published a short review in *Advanced Materials & Processes*. Editor-in-chief Frances Richards highlighted their article, "Copper alloys resurface as an anti-microbial force" (https://bit.ly/2wuuAeT), noting that "With anti-microbial copper alloys able to kill 99% of bacteria on their surfaces within 2 hours, its use in hospital settings should be more widespread than it currently is." In clinical trials at medical intensive care units in three hospitals, six items (10% of the surface area) in the hospital room were made from copper alloy: over-the-patient tray, IV pole, caps on the bed rails, nurse's call button, visitor's chair armrests, and medical input device/computer mouse. For more information, contact Dr. Michels at Corinne.Michels@qc.cuny.edu.

The "copper medical ICU room" of Sloan-Kettering Hospital, New York. Can you see the six items made from the copper alloy?

BIOLOGY ALUMNI FUND DONATIONS FY2017

In fiscal year 2017, 57 of our alumni donated $10,164.43. This is a significant increase compared to last year. We are pleased that so many of you expressed your faith in the department's allocation of these discretionary funds by making a donation. Thank you!

These funds are used for student educational enrichment. Most focus on students directly: presentations by visiting scientists, support of student research and travel to scientific conferences, supplements to student graduation awards, and special events. Alumni funds have also been used for faculty recruitment, limited to travel expenses. Attracting new faculty members significantly expands student educational opportunities. Keep this in mind when you read about additions to the Biology Department.

If you do not already contribute, please tell us what we can do to inspire you to donate. Send emails to Esther. Muehlbauer@qc.cuny.edu or snail mail to Dr. Esther Muehlbauer, Biology Department, Queens College, CUNY, 65-30 Kissena Boulevard, Queens, NY 11367-1597.

For more information on how to donate online, please see the box on page 10.

DONORS LIST FY2017

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$100
Dennis S. Block
Marc D. Citrin
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Janet A. Schneller
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$10-99
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John J. Foti
Ruth E. Gottesman
Brenda J. Jahn
Esther Muehlbauer
Leslie E. Stern
Beatrice Yin

FACULTY SCHOLARSHIP 2017

D = Doctoral student M = Master's student U = Undergraduate student

BOOKS

Muehlbauer, E., 2017. *Plato to Darwin to DNA: A Brief History*, revised edition with an online component. Kendall Hunt Publishing, NY. Pp. 68.

BOOK CHAPTERS, REVIEW ARTICLES

Ju[D], C. and **D. C. Lahti**, 2017. Review of Tim Burkhead, *The Most Perfect Thing: Inside (and Outside) a Bird's Egg*. *Auk: Ornithological Advances* **134**:922-924.

Michels, H.T. and **C.A. Michels**, 2017. Potential of copper alloys to kill bacteria and reduce hospital infection rates. *Internal Medicine Review* **3(3)**: 363-374. (DOI: dx.doi.org/10.18103/imr.v3i3.363)

Savage-Dunn, C. and R.W. Padgett, 2017. The TGF-β Family in *Caenorhabditis elegans*. *Cold Spring Harbor Perspectives Biology* **9**: a022178. (doi: 10.1101/cshperspect.a022178)

Waldman, J., 2017. An eel fishing legacy worth remembering. *Fisheries* **42**:71-72.

PEER-REVIEWED PUBLICATIONS

Abellán, P., J.L. Tella, M. Carrete, L. Cardador, **J.D. Anadón**, 2017. Climate matching predicts spread rate but not establishment success in recent undeliberate bird introductions. *Proceedings of the National Academy of Sciences USA* **114**: 9385-9390.

Krakauer, N.Y., T. Lakhankar, **J.D. Anadón**, 2017. Mapping and attributing normalized difference vegetation index trends for Nepal. *Remote Sensing* **9**: 986.

Graciá, E, M. Vargas, M. Delfín, **J.D. Anadón**, A. Giménez, F. Botella, S. Fahd, C. Corti, U. Fritz, 2017. Expansion after expansion: dissecting the phylogeography of the widely distributed spur-thighed tortoise *Testudo graeca* (Testudines: Testudinidae). *Biological Journal of the Linneanan Society* **121**: 641-654.

Rodríguez-Caro, RC, E, Oedevoken, E, Graciá, **J.D. Anadón**, S.T. Buckland, M.A. Esteve, J. Martínez, and A. Giménez, 2017. Low tortoise abundances in pine forest plantations in forest-shrubland transition areas. *PLoS ONE* **12**: e0173485.

Bhattacharjee, A., **J.D. Anadón**, D.J. Lohman, T. Doleck, T. Lakhankar, B.B. Shrestha, *et al*., 2017. The Impact of Climate Change on Biodiversity in Nepal: Current Knowledge, Lacunae, and Opportunities. *Climate* 5: 80.

Blotnick[U] J.A., C.A. Vargas[D], **J.J.Dennehy**, R. Zurakowski, and A. Singh, 2017. The effect of multiplicity of infection on the temperateness of a bacteriophage: implications for viral fitness. *56th IEEE Conference on Decision and Control, Proceedings:* pp.1641-1645. (https://doi.org/10.1109/cdc.2017.8263885)

Ghusinga[D], K., **J.J. Dennehy**, and A. Singh, 2017. First-passage time approach to controlling noise in timing of intra-cellular events. *Proceedings of the National Academy of Sciences USA 114:* 693–698.

Manthey, J.D., J. Reyes-Velasco, **X. Freilich**, and S. Boissinot, 2017. Diversification in a biodiversity hotspot: genomic variation in the river frog *Amietia nutti* across the Ethiopian Highlands. *Biological Journal Linnean Society* **122**: 801–813. (https://doi.org/10.1093/biolinnean/blx106)

Reyes-Velasco, J., J.D. Manthey, Y. Bourgeois, **X. Freilich**, and S. Boissinot, 2018. Revisiting the phylogeography, demography and taxonomy of the frog genus *Ptychadena* in the Ethiopian highlands with the use of genome-wide SNP data. *PLoS ONE* **13**: e0190440. (https://doi.org/10.1371/journal.pone.0190440)

Habig[U], B., P. I. Chiyo, and **D. C. Lahti**, 2017. Male risk-taking is related to number of mates in a polygynous bird. *Behavioral Ecology* **28**: 541-548.

Palmisano[D], N.J., N. Rosario[U], M. Wysocki[U], D. Jimenez[U], B. Grant, and **A. Meléndez**, 2017. The recycling endosome protein RAB-10 promotes autophagic flux and localization of the transmembrane protein ATG-9. *Autophagy* **5**: 1-12.

Galluzzi, L., E.H. Baehrecke, A. Ballabio, P. Boya, J.M. Bravo-San Pedro, F. Cecconi, A.M. Choi, C.T. Chu, P. Codogno, M.I. Colombo, A.M. Cuervo, J. Debnath, V. Deretic, I. Dikic, E.-L. Eskelinen, G.M. Fimia, G.M., S. Fulda, S., D.A. Gewirtz, D.R. Green, M. Hansen, J.W. Harper, M. Jäättelä, T. Johansen, G. Juhasz, A.C. Kimmelman, C., Kraft, N.T. Ktistakis, S. Kumar, B. Levine, C. Lopez-Otin, F. Madeo, S. Martens, J. Martinez, **A. Meléndez**, N. Mizushima, C. Münz, L.O. Murphy, J.M. Penninger, M. Piacentini, F. Reggiori, D.C. Rubinsztein, K.M. Ryan, L. Santambrogio, L. Scorrano, A.K. Simon, H.-U. Simon, A. Simonsen, N. Tavernarakis, S.A. Tooze, T. Yoshimori, J. Yuan, Z. Yue, Q. Zhong, and G. Kroemer, 2017. Molecular Definitions of Autophagy and Related Processes. *EMBO Journal* **36**(13): 1811-1836.

Ames[D], K. and **A. Meléndez**, 2017. Non-autonomous autophagy in germline stem cell proliferation. *Cell Cycle* **18**(16): 1481-1482.

Ames[D], K., D. DaCunha[D], B. Gonzalez[U], F. Lin[U], M. Konta[M], L. Starikov[U], S. Wong[U], H.E. Buelow, and **A. Meléndez**, 2017. A cell non-autonomous role of BEC-1/BECN1 in coordinating cell cycle progression and stem cell proliferation during germline development. *Current Biology* **27**(6): 905-913.

Liang J, Y. Shaulov[U], **C. Savage-Dunn**, S. Boissinot, and T. Hoque, 2017. Chloride intracellular channel proteins respond to heat stress in *Caenorhabditis elegans*. *PLoS ONE* **12**: e0184308. (https://doi.org/10.1371/journal.pone.0184308)

Waldman, J., 2017. A novel three-way interaction among a fish, a parasitic copepod, and algae. *Ecology* **98**: 3219-3220.

PROFESSOR PETER CHABORA RETIRES

Professor Emeritus Peter C. Chabora

After 48 years at Queens College, Dr. Peter C. Chabora has retired. He earned his PhD in 1967 at Cornell University. His thesis (with David Pimentel) explored patterns of evolution in host-parasite systems, with a focus on insect parasitoids of various flies. He spent a post-doctoral year at the Zoology Department of the University of Oxford, with Prof. E. B. Ford, followed by a year as assistant professor at Illinois State University, before coming to Queens College in 1969. He is married to fellow Queens College biologist Dr. H. Roberta Koepfer, who retired in 2007.

Dr. Chabora rose to full professor in 1980, and was elected Chair of the Department 1981–1984. From 1984 to 1992 he served as Executive Officer for the Ph.D. Program in Biology at the CUNY Graduate Center. Among numerous activities at the Graduate Center, Prof. Chabora served on the Doctoral Faculty Policy Committee (responsible for Graduate Center governance) and was elected chair for seven years. During this time, he was also active in national biology societies such as the American Society of Naturalists (elected secretary, member of the Executive Committee), the Organization for Tropical Studies (secretary, member Board of Directors), and the New York Entomological Society (Board of Trustees). Concurrently, Prof. Chabora was also involved in a range of departmental, college-wide, and CUNY committees.

Between 1966 and 1992 Dr. Chabora published 21 papers in peer-reviewed journals (*Annals of the Entomological Society of America, Journal of the NY Entomology Society, Experientia, Behavioral Genetics, Evolution, Canadian Entomologist, Heredity*). Most of these studies dealt with parasite-host interactions between wasp parasitoids and their fly species hosts. The parasitoids are tiny wasps that lay their eggs in fly pupae or larvae. The host is consumed, and wasps instead of fruit flies emerge from the host puparium. In addition, several studies involved eye-color mutants of blowflies and their behaviors as modulated by ambient light conditions. These studies led to creating an electronic activity-monitoring device for automated recordings, one of which is located in the display cabinet of the Biology Office.

Some parasitoids are widespread and unselective in host choice while others are highly selective. Over years of world travel Dr. Chabora had accumulated what he calls the world's largest collection of wasp parasitoids of drosophilids, collected from Australia, the Caribbean, East Africa, the Seychelles, India, Thailand, Japan, and Papua New Guinea. Stock populations of about 40 species were established at the B-building laboratory at Queens College and included some named species, but the majority were new to science. In 1987 when the biology laboratories scattered across the campus were moved to the new Science Building, the growth chambers overheated and the entire collection was lost.

In 1993, after returning to Queens College from the Graduate Center and a thought-provoking sabbatical, Dr. Chabora switched gears. With the same energy he had devoted to 23 years of research and science administration, he spent the succeeding 25 years pursuing the primary mission of the college—education—focusing on the major's introductory courses. Besides teaching courses at the undergraduate and graduate levels, he explored new approaches to teaching. He became involved with the development of a CUNY Macaulay Honors College seminar in Science and Technology in New York City. The seminar would explore a new topic every year, such as "The Ecological Footprint of NYC" and "The ecology of mortality and morbidity in NYC from 1700 to the present."

His regular course offerings included Ecology, Limnology, the organization of a weekly Biology seminar, and Life Forms and Ecosystems (Biology 107/106), one of the foundation courses of the biology major. In this far-ranging course, he confesses he enjoyed delving into areas of biology that lay outside his personal focus of evolutionary ecology.The lectures were updated each semester, with heavy utilization of the internet site Blackboard. In 1999 he received the Presidential Award for Excellence in Teaching. In 2004 he began publishing again with the development of a lab manual for Intro Biology 107. 2018 saw the third edition (5th edition overall) of his Laboratory and Lecture Synthesis, now published by Hayden-McNeil/Macmillan and running to 569 pages of illustrations and text.

We wish Peter and Roberta joy and energy in their now joint retirement years ahead.

FACULTY NOTES 2017

This section reviews the highlights of Biology Department faculty members and staff, and students' extracurricular scholarly activities in 2016. The diversity of these activities is a clear indication of the national and international recognition of our dedicated faculty. You should note the extent to which undergraduate students are integrated into their research programs as indicated in co-author listings p. 9.

JOSE ANADÓN co-authored "Climate matching predicts spread rate but not establishment success in recent undeliberate bird introductions," an article that was specially selected for the commentary. The commentary article by J. Lockwood, "Exotic birds provide unique insight into species invasions," appeared in the *Proceedings of the National Academy of Sciences* USA 114: 9237-9239.

Along with Queens College faculty members Jeff Bird (School of Environmental Sciences) and John Dennehy (Biology), Dr. Anadón received a CUNY Interdisciplinary Research Grant and a Queens College Research Enhancement Award to fund a study of the "Impact of Urbanization on Soil Microbiomes and Viromes."

PROFESSOR PETER CHABORA retired in August 2017 after 48 years at Queens College.

TRAVIS DAVID, one of the Biology Department's Senior College Laboratory Technicians, obtained the degree of Doctor of Education (EdD) from the College of Graduate and Professional Studies of the University of New England. His dissertation was entitled "Contextualizing LGBTQ Faculty Experiences: An Account Of Sexual Minority Perceptions, focused on Educational Leadership and the experiences of LGBTQ faculty working in academic environments."

JOHN DENNEHY was invited to speak on "Event Timing in Single Cells" at the Department of Biology, Kent State University, Ohio. He attended the Texas Phages 2017 conference held in College Station, Texas, where he spoke on, "*Does cell growth rate affect event timing in Escherichia coli?*"

Dr. Dennehy was co-Principal Investigator on several successful grants. He and Dr. Abhyudai Singh of University of Delaware received an award from the NIH Institute of General Medical Sciences to fund their study, *Consequences and control of randomness in the timing of intracellular events*. Dr. Dennehy and Jose Anadón (both of the Biology Department) and Jeff Bird (School of Earth and Environmental Sciences) were awarded a CUNY Interdisciplinary Research Grant and a Queens College Research Enhancement Award (see above).

Dr. Dennehy also received an award from the CUNY Advanced Science Center Seed Program entitled "*Does a Host-Acquired Factor Impact Fitness on Subsequent Hosts in an RNA Virus?*" He also received a CUNY Summer Advanced Grant Writing Award entitled "*Topologies of Adaptive Landscapes in Influenza Virus Emergence*."

ANDREW GRELLER received the

Distinguished Service Award from the Torrey Botanical Society on the occasion of its 150th anniversary. The award, the first in the society's history, was presented at an event held at the New York Botanical Garden, Bronx, New York.

Dr. Greller authored two articles for the Long Island Botanical Society Newsletter: "Post-'Sandy' Survey of Forest Trees in a Muttontown site, Town of Oyster Bay, Nassau County, L.I. New York" (Vol. 27(2): 13-14) and "The Blackjack Oak-dominated Maritime Low Forest of Sunken Meadow (Governor Alfred E. Smith) State Park, Kings Park, Suffolk County, New York" (Vol. 27(4): 25, 27-28). He also provided his requested photograph of the plant *Atriplex crista-ta* to the online publication *An Ecological Manual of New York City Plants in Natural Areas,* M.B. Gargiullo, editor (http://nyc.books.plantsofsuburbia.com/).

Dr. Greller was invited to present a series of five lectures on "the Natural History of Southern South America" during a March sailing of the Celebrity Infiniti cruise ship.

DAVID LAHTI was invited to present

lectures on his research at Rider University, Brooklyn College, Columbia University, Massachusetts Institute of Technology, Gordon College, St. Francis College, Stevens Institute of Technology, and New York University. You can watch Dr. Lahti's presentation at the Moral Sense Colloquium held at St. Francis College, Brooklyn Heights, New York, "Celebrating 45 years of giving professional moralists the heebie-jeebies" (https://vimeo.com/220985538).

Dr. Lahti is currently the Biology Department's Graduate Advisor and Director of the Biology Master's Program.

ALICIA MELÉNDEZ was invited to

speak on her research at several national and international venues. She gave "Autophagy in *C. elegans* development and aging" talks at the Biology Department of the College of Staten Island of CUNY and at Lehman College of CUNY. She presented another talk, "A non-cell-autonomous role of BEC-1/BECN1/Beclin1 in coordinating cell-cycle progression and stem cell proliferation during germline development," at the 17th International Worm Meeting held at University of California, Los Angeles. Dr. Meléndez was an invited speaker at the First Latin American Worm Meeting, Montevideo, Uruguay, where she discussed "Autophagy in *C. elegans* development."

continued on page 12

continuesd from page 11

Dr. Meléndez co-chaired and organized a one-day conference for the New York Area Worm Meeting held at New York University. In addition, she was promoted to Professor of Biology and was appointed Chair of the Subprogram in Molecular, Cellular and Developmental Biology of the Doctoral Program in Biology of the Graduate School of CUNY.

CATHY SAVAGE-DUNN co-organized

the 2017 Northeast Regional Society for Developmental Biology conference at the Marine Biological Laboratory, Woods Hole, Massachusetts (https://nesdb2017.github.io/). She presented a talk at the New York Area Worm Meeting at Lehman College of CUNY entitled, "DBL-1 is a BMP/TGFβ-related signal that regulates growth and fat storage in the nematode *C. elegans*." Dr. Savage-Dunn also spoke in the Biology Department of the University of Maryland, Baltimore County on "BMP signaling regulates body size and fat accumulation in the nematode *C. elegans*." She gave an oral presentation at the Society for Developmental Biology 76th Annual Meeting, Minneapolis, Minnesota, on "Regulation of fat accumulation by DBL-1/BMP signaling in *C. elegans*." She attended the American Society for Cell Biology/EMBO 2017 Meeting in Philadelphia, Pennsylvania, and presented a poster, "*Caenorhabditis elegans* BMP signaling determines body size via transcriptional regulation of collagen genes."

Dr. Savage-Dunn was appointed Executive Officer of the Doctoral Program in Biology of the Graduate School of CUNY. She also served on the grant review panel for the NIH Pathway to Independence Award (K99/R00) program. This program is intended to facilitate the transition of outstanding postdoctoral researchers to independent, tenure-track or equivalent faculty positions. Dr. Savage-Dunn was co-Principal Investigator of a CUNY Community College Research Grant with her former doctoral student Dr. Jun Liang, an Associate Professor at Borough of Manhattan Community College–CUNY. The title of the award is "Novel mechanism of chloride intracellular channel protein (CLIC) regulated healthy aging."

JOHN WALDMAN was invited to write

an obituary of Robert H. Boyle, a founder of the watchdog group Riverkeeper and unofficial guardian of the Hudson River. The obituary appeared in the August 2017 issue of *Fisheries Magazine*.

Dr. Waldman made presentations on conservation biology and ecology in a variety of venues. He presented "Heartbeats in the Muck: The History, Sea Life, and Environment of New York Harbor" to the New York Harbor School, Pace University, New York, New York. He spoke about "The Running Silver Project: Reconciling Fish Migrations and Energy Production on Large Rivers" at the Queens College School of Earth and Environmental Sciences and the Biology Department colloquia. He presented at the Geology, Earth Science, and Oceanography Series (GEOS) of lectures and seminars of the CUNY Graduate Center on "Maybe the Twain Can Meet: Energy Production and Fish Migration on Atlantic Rivers." Dr. Waldman discussed his ideas on "Rethinking the Energy-Ecology Nexus on Large Atlantic Rivers" with Riverkeeper in Ossining, New York. He was a guest lecturer at New York University on "The Biota of the Hudson River and the History of New York Harbor." He gave a seminar on "Dams and what eel alleles reveal and whether it's real" at the Hudson River Foundation. Dr. Waldman participated in a webinar for the Science & Resilience Institute for Jamaica Bay on his "Research on Jamaica Bay: Jamaica Bay Historical Change and Ecology."

Dr. Waldman also participated in workshops on these topics. He presented to the Hudson River Target Ecosystem Characteristics Workshop of the Nature Conservancy held at Marist College, Poughkeepsie, New York. He also spoke on the Harbor Estuary Program, Hudson River Foundation at the Impact Evaluation of Projected DO Deficits in the NY-NJ Harbor Estuary Workshop. Dr. Waldman participated in the Science of the Living City Panel Discussion at Kingsborough Community College, where he spoke on "New York City's Coastal Future: What Can Jamaica Bay Be?" Also, he was a poster interpreter at the Flushing Waterways Community Visioning Workshop held at the Queens Museum.

With colleagues M. DeGraeve, T. Linton, and R. Miller, Dr. Waldman submitted "Final Report to the New York-New Jersey Harbor Estuary Program" to the Impact Evaluation of Projected DO Deficits in NY-NJ Harbor Estuary project. He also authored op-eds in the *New York Times* and the *Daily News* in 2017 (see "Faculty in the News" section, page 7).

Dr. Waldman attended the American Fisheries Society Conference held in Tampa, Florida, in August, and presented a talk, "Diadromous Fish Restoration and the Importance of Fishing vs. Other Drivers: Tractability Matters." Also, with colleagues S. Chin and L. Alter, he presented a poster, "What's in the Water."

DANIEL WEINSTEIN spoke at the STEM Academies and STEM Research Club, Queensborough Community College, CUNY on "T-Box proteins and the restriction of cell fate." He and doctoral student Ye Jin attended the annual Society for Developmental Biology, Northeast Regional Meeting, held at Marine Biological Laboratory, Woods Hole, Massachusetts, where they presented a poster on Ye Jin's thesis research entitled "Pitx1 regulates cement gland development through activation of transcriptional targets and inhibition of BMP signaling."

IN MEMORIAM
Robert E. Savage, PhD (1933–2016)

It is with sadness that we report that Robert Savage who taught at Queens College for four years, passed away in May 2016.

Professor Savage's undergraduate training was in botany, but during the Korean War, he served as a lab technician at the Walter Reed Army Medical Center in the Research, Virus, and Rickettsial Diseases Department. From there, he went on to earn an MS in botany (1958) and a PhD in cell biology and biochemistry (1963) at the University of Wisconsin-Madison.

He joined the Queens College Biology Department in 1962, teaching the introductory course in Life Forms and Ecosystems (today Biology 106). While at Queens College, Professor Savage began laboratory research in cell biology. After obtaining tenure in 1965, he accepted a position at Swarthmore College, becoming the Isaac H. Clothier Jr. Professor of Cell Biology and serving as Department Chair 1976–1981.

Professor Savage studied the methodology of somatic cell hybrid formation, often involving different species. His work, carried out with collaborators from the Karolinska Institute in Stockholm, Sweden, explored the molecular interactions between the nucleus and cytoplasm in hybrid cells, including cytoskeletal dynamics and altered patterns of gene expression. He actively supported research by undergraduates in his laboratory, even in areas outside his primary scientific focus, and was considered an effective and inspirational cell biology teacher and mentor.

Photo: Swarthmore College

Professor Robert Savage in the 1960s

Professor Savage retired in 1995, but continued to be active in campus life and activities.

A web page gives details of his life and scientific career:

http://www.swarthmore.edu/news-events/memory-robert-savage#.WHBVTvQZz9I.email

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BIOLOGY GRADUATION HONOREES

Laura H. and Arthur L. Colwin Prize—Kuang Myat San
Darwin Prize—Michael Agulnick and Miquinn Jia
Donald E. Lancefield Award—Cathie Babadzhanova and Frank Coppola

LIST OF GRADUATES

HH—with High Honors
H—with Honors
ΦBK—Phi Beta Kappa, the national honor society
BΔΦ—Beta Delta Phi, the national Biology Honor Society

Helen Abraham—H
Ilan Abramov
Michael Agulnick—HH
Tasfia Ahmed—H
Sahar Ali—H
Syeda Ali
Sherryann Allyar
Philp Appleby
Mersal Ashrafi
Cathie Babadzhanova—HH
Jeana Barenboim—HH
Angel Beck—HH, ΦBK
Shabina Beer
Sofia Begum
Shweta Benara
Lancelot Benn
Alexandra Berry
Anna Bordi
Michal Borusiewicz
Rafsan Byron
Elizabeth Chacko
Stephanie Chavez
Cindy Chen
Barbara Cisek
Christopher Clough
Frank Coppola—HHH
Shi Gen Dong
Wenfang Dong
Jasmina Dushi
Noah Ebrani
Abigail Fuentes
Mary-Ann Gallagher
Kirollos Gerges
Allan Giri—H
Amanda Goldstein—HH
Marcarena Gomez de la torre Clavel
Tahsin Haris
Arya Hawkins-Zafarnia—H
Joseph Haynes
Paul He
Jennifer Hegedus—H
Kimberly Hegedus—H
Manuel Hernandez
Caressa Hillick
Faizal Hussein
Michael Ibasan
Adil Iqbal
Hamza Jaber
Maryam Jafri
Khalida Jalili
Miquinn Jia—HH
Mohamed Jivraj
Mohammed Kabir
Saranjeet Kakania
Haroon Karabay—HH
Baljeet Kaur
Manpreet Kaur
Si Yeon Kim
Trisha Kim
Elizabeth Ann Knox
Demetra Kouspos
Joselyn Landazuri Vinueza
Emely Ledesma
Kelsy Lewis
Steffi Matadial
Tiffany Mathew
Linn Maw
Yaxkyn Mejia
Christopher Melbourne
Kimberly Miller
Alan Mook—HH
Michelle Mordukhaev—HH
Ibrahim Moslimani
Angelo Mula
Maham Mushtaq
Amna T Naqui
Fathima Benazir Nazumudeen
Shayan Nossrati—HH
Malika Nurbekova
Anthony Ostrowski
Danielle Ovelheira
Paola Paredes
Carlos Pareja
Roy Park
Dhara Patel—H
David Perez—H
Xuanzhen Piao
Ariel Pinhasov
Leah Punalall
Emily Rados
Md. Mushfiqur Rahman—H
Christy Rajoomar—H
Ivonna Reda
Danielle Rivera—H
Ricardo Rodriguez
Piyush Salaria
Shazia Saleem
Kuang Myat San—H
Sean Sargeant
Francesca Scaturro
Anum Sheikh
Hyo Jung Shin—H
Anum Siddiqui
Ashvini Singh
Gagan J Singh
Bianca So
Oluwatobi Sobajo
Yasmine Subtyl
Kimberly Sy
Jacob Taber—H
Emilia Tercjak
Joseph Ushyarov
Rasheed Usman
Oren Vaknin
David Velazquez
Brittney Warner—H
Deborah Watman
Nathan Wong
Rui Ricardo Ye Wang
Diana Yunov
Shahnum Zaidi

MASTER'S DEGREE RECIPIENTS

Ghumique Asfand
Kenefia Phillip
Judith Barona
Kenesia Phillip
Maritza Rodriguez
Katie Sheridan
Laurin Larian
Simone Oliver
Brian Stonaker

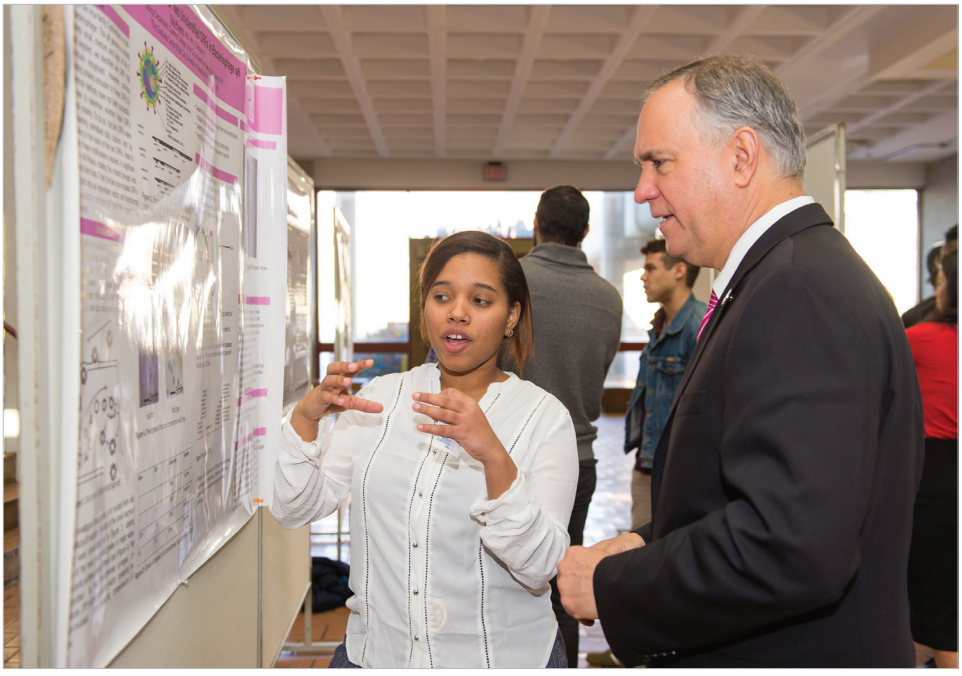
BIOLOGY SYMPOSIUM 2017

This year's Biology Symposium was organized by Visiting Assistant Professor Dr. Corinna Singleman and Chief CLT Dr. Xenia Frelich. The symposium was held at the end of winter break, January 25, so that more colleagues could attend before the spring semester began. Trying a slightly different format in 2017, the organizers invited two Biology Department alumni to give keynotes. In addition, students were encouraged to participate in a research poster session. This year's symposium was different in one other way: Although talks focused on topics related to the life sciences, the speakers crossed department boundaries and were selected from other scientific disciplines.

Speakers came from the Queens College Anthropology, Biology, Chemistry & Biochemistry, Computer Science, Family Nutrition & Exercise Sciences, Physics, Psychology, and Sociology Departments. Faculty members, two doctoral candidates, and one undergraduate student gave oral presentations. The poster session was very well attended and provided an excellent opportunity for student presenters to defend their research. During the juried poster session, a faculty team of judges interviewed each of the student presenters; the top three posters were given awards during the closing remarks session.

The work of keynote speakers Olivier Noel and Dr. Peter Novick is discussed in the ALUMNI UPDATE section of this issue of *Biology Currents*. Other presentation topics included intracellular signaling in breast cancer cells (Susan Rotenberg, Chemistry & Biochemistry), biosensors (Lev Deych, Physics), *C. elegans* body size regulation and collagen genes (Uday Madaan, Biology), and neuron segmentation (Chao Chen, Computer Sciences).

Biology Symposium 2017 attendees (from left) Professor Maureen Pierce-Anyan, President Félix V. Matos Rodríguez, keynote speaker Olivier Noel, and Professor Nathalia Holtzman



President Félix V. Matos Rodríguez talks to Elsa J. Rosario about her award-winning poster presentation.

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