

# Environmental Health Sciences Mailman School of Public Health

## Department Newsletter Spring 2017

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# Letter from the Chair

Dear Colleagues and Friends of the Department,

Transitioning into my first spring season here in NYC, a symbolic season of growth, I am reminded daily of our EHS family thriving together and supporting one another. It's estimated that we spend about 30% of our time at work (our students and postdocs might suggest this is much higher!), but I see many of us continue dedicating time to strengthen our Department well outside of the typical 9-5 timeframe. This dedication to learning and growing is noticeable on all levels: Our students are learning foundational public health tools, postdocs are training and gaining expertise through mentorship, staff are learning professional skills to streamline processes that help our educational and research activities, and faculty are tirelessly extending effort to their maximum capacity through teaching and mentorship, applying for and collaborating on grants, researching to learn new details about environmental health, serving on committees, and translating findings to the public, etc. I am simply amazed every day at the unison and cross-level reciprocation of learning and teaching here within EHS.

In fact, I see everyone more dedicated than ever, even in the current political climate, and I want to sincerely thank each of you for your continued hard work to improve our Department and our mission.

With graduation around the corner, I would like to send the warmest of congratulations to all of our MPH and PhD students who will be carrying the EHS torch as they embark on their journeys outside of Mailman! The diversity of interests and experiences among all of you will continue advancing the science, education, and translation of environmental health into society. While the next phase of your life continues, know that we, your EHS family, will always be here to support you in the years ahead.

Cheers to great achievements, our upcoming graduates, and warmer weather!

Sincerely,  
Andrea Baccarelli





# EHS Departmental Highlights

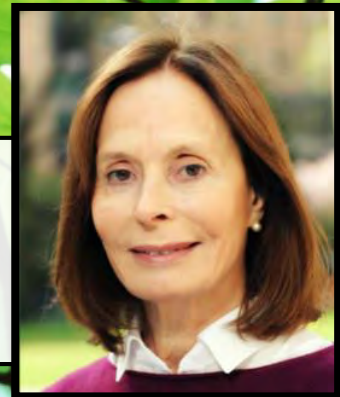
Dr. Marianthi-Anna Kiomourtzoglou, Assistant Professor of Environmental Health Sciences, has been awarded the Calderone Junior Faculty Prize to develop a new method of assessing multi-pollutant exposures in environmental epidemiologic studies. The awardees for this prize are chosen based on the scientific merit of their research and its significance for public health.



Dr. Ana Navas-Acien, Professor of Environmental Health Sciences, has been appointed to two committees within the National Academy of Sciences. These include the Committee on the Review of the Health Effects of Electronic Delivery Systems and the Standing Committee on Medical and Epidemiological Aspects of Air Pollution on U.S. Government Employees and their Families.



Dr. Perera, Professor of Environmental Health Sciences, was interviewed for a series of videos by Pure Earth as part of the announcement of the Global Commission on Pollution + Health Report.







Drs. Graziano and Shaman, Professor and Associate Professor of Environmental Health Sciences, participated in the daylong Evidence into Action Teach-In. Dr. Graziano discussed the history of lead regulation in the US, the continued lowering of allowable blood lead levels by governmental agencies, and research into the effects of lead on neuro-cognition. Dr. Shaman talked about climate and health, the prospects

for US investment in climate research, and possible international regulation scenarios under the new administration. Both speakers presented these issues in light of recent events, including the Flint, Michigan lead crisis, and new federal appointments.



Dr. Graziano's Superfund Research Program, which involves a team of researchers from Lamont-Doherty Earth Observatory and City College, has partnered with Hunterdon Medical Center and the New Jersey Department of Environmental Protection to offer free well water testing of arsenic and lead for pregnant women and families with young children. Private wells in the Hunterdon County area can have high levels of naturally-

occurring arsenic, which can be especially harmful to children who drink the contaminated water. The team of researchers is engaged with the community to educate vulnerable populations of the potential risks, offer the necessary testing, and provide them with remediation guides if necessary.





Dr. Diane Re, Assistant Professor of Environmental Health Sciences, recently published a paper in *Archives of Toxicology*, discussing the links between organophosphorous pesticides and amyotrophic lateral sclerosis (ALS).



## Center for Children's Environmental Health Publications

Cowell W.J., Stapleton H. M., Holmes D., Calero L., Tobon C., Perzanowski M., Herbstman J.B. 2017. Prevalence of historical and replacement brominated flame retardant chemicals in New York City Homes. *Emerging Contaminants*.

Ipapo KN, Factor-Litvak P, Whyatt RM, Calafat AM, Diaz D, Perera F, Rauh V, Herbstman JB. Maternal prenatal urinary phthalate metabolite concentrations and visual recognition memory among infants at 27 weeks. *Environmental Research*. 2017 May 31;155:7-14.

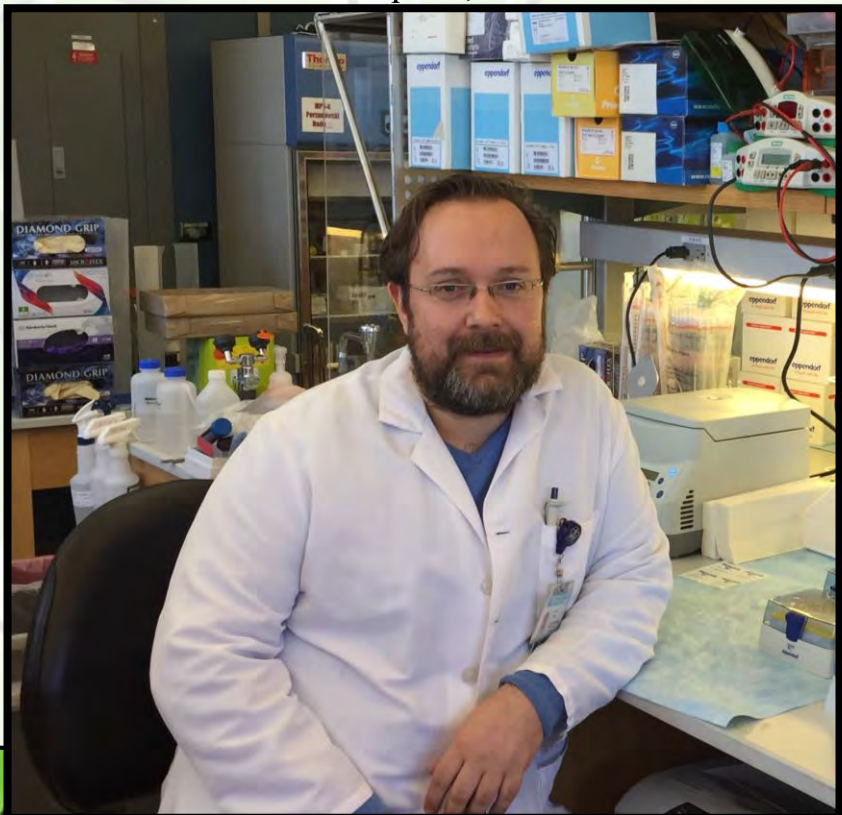
Joan Lee, Vrinda Kalia, Frederica Perera, Julie Herbstman, Tingyu Li, Jisheng Nie, L.R. Qu, Jie Yu, Deliang Tang. 2016. "Prenatal airborne polycyclic aromatic hydrocarbon exposure, LINE1 methylation and child development in a Chinese cohort." *Environment International*.

Stephanie Lovinsky-Desir, Kyung Hwa Jung, Andrew G Rundle, Lori A Hoepner, Joshua B Bautista, Frederica P Perera, Steven N Chillrud, Matthew S Perzanowski, Rachel L Miller. Physical activity, black carbon exposure and airway inflammation in an urban adolescent cohort. *Environmental Research*, 151:756-762, 2016. PMCID: [PMC5081133](https://pubmed.ncbi.nlm.nih.gov/31581133/)



# Staff Highlight: Adnan Divjan

Adnan Divjan, Staff Associate, is an integral part of the Department of Environmental Health Sciences. Adnan is dedicated to overseeing the daily activities of Dr. Matt Perzanowski's laboratory, mentoring junior technicians and students, and conducting his own research projects. Adnan has a long history of dedicated service to EHS. First arriving in the Department in 1996 as a high school volunteer research assistant, he subsequently worked in the administrative office and several EHS labs before he ultimately arrived in Dr. Perzanowski's lab. Adnan is committed to ensuring that the best science is conducted in the lab, that each experiment is run correctly, and each sample is processed properly. Adnan has worked on scientific projects that have included implementing novel methods for assessing biomarkers of asthma and inflammation in the airways and developing immunoassays for testing for allergy to bedbugs and molds. He has been a co-author on 19 scientific papers and presented research at many national scientific meetings. In addition to his dedication and commitment to the highest quality laboratory work, a particular strength of Adnan's is his ability to link the EHS laboratories through shared resources and methodological experiences. Adnan has also taken on teaching roles in our department over the years. Most recently, he developed a two-session introduction to basic immunological based protein identification laboratory methods for our EHS Laboratory Methods course. A 2011 MSPH Staff Award for excellent recipient, Adnan's devotion to quality experimentation, along with his ability to connect the infrastructure of our department's laboratories has advanced a primary goal of our department - to conduct molecular epidemiology by providing reliable, consistent, and strong scientific laboratory work. In the summer, Adnan will take on a new role in the EHS department as a DrPH student. For his dissertation research, Adnan plans to continue his work on examining the relevance of fungal exposure to respiratory disease.





# Career Event

The Department, along with the Office of Career Services and Students for Environmental Action, hosted the first annual EHS Career Event on April 5th, 2017. Recruiters included:

EPA-Region2, Student

Conservation Association, EcoHealth Alliance, New York City Department of Health and Mental Hygiene, Columbia University Environmental Health and Safety, NYU School of Medicine, and Weill Cornell Medicine. The event was intimate and lively as recruiters moved around the room to network with different groups of students. The career event allowed students to not only learn about different job or practicum opportunities available through the



represented organizations and companies, but also allowed students to network and make valuable connections with people in their prospective fields. A lunch was served at the end of the event where students and recruiters were able to



mingle and continue developing relationships and finding opportunities.



# PrIMER Student Highlight

Hadler da Silva, PrIMER '16



Hadler (pictured above) presented his PrIMER research poster, Allergen exposure in NYC Subway Trains, at the 2016 Annual Biomedical Research Conference for Minority Students (ABRCMS), where he won the award for Outstanding Poster Presentation in Public Health. His research focused on identifying and quantifying allergens in different subway trains. Hadler collected air samples on the 1 and A trains and tested those samples for mouse and rat allergens. ABRCMS took place in Tampa, Florida in 2016, and it was Hadler's first time at the national conference. He found the conference to be intellectually stimulating and encouraging for those present to pursue graduate school. After going to ABRCMS, Hadler can confidently say that he would present again in another conference and wishes to continue to learn about other public health research being done.



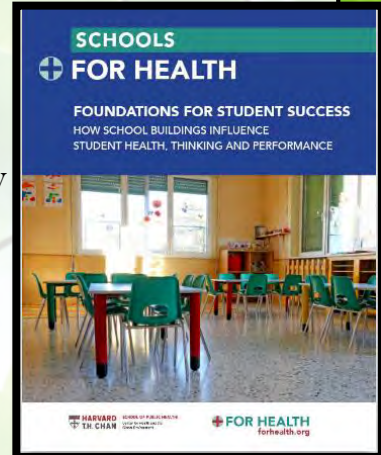
# Alumni Highlights

Erika Eitland, ScD Candidate, Harvard School of Public Health,  
Mailman MPH '15



Erika recently released a white paper entitled *Schools for Health: Foundations for Student Success*. Written in a user-friendly way to promote use from stakeholders, the paper dives into over 250 research articles and explains how children are particularly susceptible to different aspects of the learning environment. The report

discusses the impact of indoor air quality, thermal comfort, lighting & views, and more on student health, cognitive function, and academic performance. The report can be downloaded at <http://schools.forhealth.org/>.



Sashti Balasundaram, MPH '08,  
Environmental & Molecular Epidemiology

As International Composting Awareness Week approaches, Sashti has been asked to speak at The Federation of New York Solid Waste Association's annual conference. His presentation titled "*Creative community-based solutions for organics recycling in NYC*" will discuss various initiatives taking place through his start-up called [WeRadiate](#).





## Maulik Baxi, MPH '08, Environmental & Molecular Epidemiology



Maulik (pictured right) is currently in Edmonton, Alberta, Canada, pursuing residency training in Public Health and Preventive Medicine with the University of Alberta Faculty of Medicine and Dentistry. He presented on Canadian First Nations Youth Suicide Prevention Strategies at his first Grand Rounds session at the Alberta Hospital, which is the largest inpatient psychiatric facility in the province of Alberta. He completed a rotation as part of his residency training with Dr.

Patrick J. White, stalwart Canadian psychiatrist, past president of Alberta Medical Association and Canadian Psychiatric Association, and Medical Director of the Alberta Hospital. Dr. White (pictured left) very kindly invited Maulik to present at the Grand Rounds, which made it even more special. It was well attended and well received!



# 2017 EHS Alumni Panel

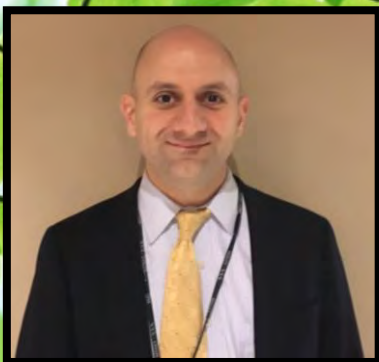
## Dr. Tiffany Sanchez, PhD '16, Environmental Health Sciences

Tiffany is a Postdoctoral Research Scientist in the Department working with Dr. Ana Navas-Acien. Her research focuses on elucidating the effects of arsenic exposure on the respiratory system, identifying the molecular mechanisms underlying these associations, and exploring the extent to which these associations are modified over the life course. During her doctoral training with Dr. Joseph Graziano, Tiffany examined the extent to which early life arsenic exposure was associated with later life lung function among a unique cohort of Bangladeshi adolescents. Since defending her dissertation last May, Tiffany and Ana have collaborated with pulmonologists and other clinicians to better understand whether arsenic-associated lung function deficits noted in other populations, like Bangladesh and Chile, are also found in the US, where arsenic exposure levels are much lower.



## Christopher M. Pitoscia, MPH '10, Environmental Health Policy

Since joining the Columbia University Environmental Health & Safety (EH&S) team in 2004, Chris has held three EH&S positions in the Department. His current role is the Manager of Research Safety Programs, where he develops and implements strategies, and leads a team of eight staff members to ensure safe work practices and compliance across all areas of the Columbia research community. Chris's current professional interests include advancing measurable safety criteria in Columbia's laboratories and improving the overall safety culture of the University. He holds the title of Certified Safety Professional as recognized by the Board of Certified Safety Professionals.





## Jonathan Sury, MPH '08, Molecular Epidemiology



Jonathan is a Project Director of Communications and Field Operations at the National Center for Disaster Preparedness (NCDP), The Earth Institute, Columbia University. He lends his expertise to a variety of disaster-related research and training-related activities at NCDP, which includes: child-focused community resilience; leveraging social media during disasters; promoting healthcare worker willingness to work during a disaster; determining racially and ethnically appropriate emergency messaging; analyzing the long-term resiliency and recovery issues in the Gulf Coast following Hurricane Katrina and the Deepwater Horizon Oil Spill; the measurement and mapping of social vulnerability; and the role of place and space in disaster recovery. He is currently leading the communications and research activities on the Resilient Children/Resilient Communities Initiative which aims to enhance the resilience of child-serving agencies at the institutional level through a community resilience approach.

## Val Richards, MPH '16, Toxicology

Val is an Environmental Health and Safety Specialist at Consulting & Testing Services, Inc. (CTSI). Val works on a variety of projects including Industrial Hygiene and Safety, Indoor Environmental Quality Assessments, Lead Based Paint Inspections and Risk Assessments, Microbial Investigations & Assessments, Hazardous Material Sampling, Moisture mapping for water intrusion events, Safety Compliance, and Community Right-to-Know (RTK) inventory & compliance. Currently, Val is working on Crystalline Silica Safety Training in accordance with OSHA's new regulations, Water Intrusion and Microbial Training, sampling of an underground tunnel in an industrial lot in Brooklyn, indoor air & environmental surveys, and personal exposure assessments.





# EHS Student Highlights

## Sonia Dattary, MPH '18, Climate and Health

Sonia transferred to our department during the fall semester. She received a BS in Environmental Science and Biology from Emory University in 2016. While attending Emory, she worked at Social Enterprise at Goizueta to help improve health and economic stability in coffee growing communities in northern Nicaragua.

This experience encouraged her to attend Mailman, where she is excited to learn more about the role of environmental effects on health. Having lived in all four corners of the U.S., Sonia is constantly looking to explore new places. In her spare time, she also enjoys reading, baking, and swimming in the Pacific!



## Jimmy Deats, MPH '17, Global Health

Jimmy worked with Hôpital Albert Schweitzer (HAS) in the Artibonite Valley Department of Haiti as a Monitoring and Evaluation Intern. He assisted in developing a protocol for the Zika surveillance system within his organization. Jimmy also taught community health workers how to identify and report suspected cases of Zika. In addition, he worked on a data quality assessment and a research study with HAS's maternal health program. He developed a report based on his analyses to improve data collection methodology and

standardization of procedures. While in Haiti, Jimmy also attended an annual festival held underneath a waterfall!





## Ragini Kathail, MPH '17, Global Health



Ragini worked on two projects at Partners for Urban Knowledge, Action, and Research (PUKAR), a community-based NGO in Mumbai, India. The first was data analysis for a household-level survey about water access and water needs in an informal settlement (“slum”). The second was helping to implement another household-

level survey in the same community, this time as a baseline for a planned health clinic intervention. In August, Ragini spent a week in Kerala with friends relaxing on the backwaters with a lovely host and delicious home-cooked meals. While there, they were recruited to be extras in a local language movie!

## Shanna Keown, MPH '17, Climate and Health

Shanna attended the inaugural Women4Climate conference as part of the C40 Cities initiative hosted by Columbia University on March 15th. The Conference focused on the role of cities and of women in addressing climate change. The Conference was a platform to bring together women across sectors and countries who are all working to advance education, innovation, or economic equality. The Conference showcased the critical role of women in fighting against climate change and air pollution. Data shows that female politicians are more likely to be focused on climate and environmental sustainability, but women hold fewer than 15 percent of parliamentary and legislative seats. To create lasting and positive change, it is critical to bring together experts across fields and stakeholders of equality and economic advancement, sexual abuse, and discrimination. The Conference also discussed: transportation services, making workplaces safer for women, including climate change into everyday decisions, and recognizing that women are key to developing new strategies.





## Aria Quan, MPH '17, Toxicology

Aria interned in the Environmental Health & Safety Department at Columbia University. During her time at EH&S, Aria worked as a casual Radiation Safety Technician in the Radiation Safety group. Aria was assigned to three projects. One of them was to create a map of radiative waste management based on their current policies. It was a challenging task to compile separate policies into one map in a short period of time, but Aria was able to use this experience to get to know different people and learn about their expertise. Overall, Aria had an excellent practicum experience!



## Li Mijie, MPH '17, Global Health

MJ traveled to Cambodia to work with the organization Helen Keller International on the Enhanced Homestead Food Production project. MJ studied the spillover effect – a measure of how much of the knowledge, attitudes, and behaviors of program participants are transferred to their non-participant neighbors. With no fluency in the native Khmer language, MJ relied heavily on sign language while conducting her fieldwork. In Cambodia, MJ felt the impacts of hunger, environmental pollution, and weak health infrastructures up-close and personally.

She hopes a social-public-private partnership model promoting grassroots leadership will take shape in Cambodia in the near future to address these public health issues.





## Emma Krasovich, MPH '17, Global Health



Emma worked for a NGO called Project Concern International in Malawi on their Njira Project, which is a USAID-funded five-year food security project. During her six months abroad, Emma's main focus was working with the Water, Sanitation, and Hygiene team to evaluate the impact of programs on the sanitation status of households. Emma also learned how to maintain a borehole as well as test community water sources for arsenic. In her free time, her favorite hobby in Malawi was running around the town she lived in. The scenery was beautiful, and the children would often run alongside her -- it always made her smile!

## Mike He, PhD Candidate, Climate and Health

Mike recently gave two lectures detailing the physics of climate change and air pollution to AP classes where he attended high school.

He also has three recent publications shown below:



1. Liu W, **He MZ**, Wang Y, Wang Y, Zhou Y, Wu M, Tang Z, Dai Y, Yuan B, Zhen S, Cheskin LJ: Differences in Health-Related Behaviors between Middle School, High School, and College Students in Jiangsu Province, China. *Asia Pacific J Clin Nutr*, **In press**. (Vol 26(4), available late 2017)
2. **He MZ**, Zeng X, Zhang K, Kinney PL: Fine Particulate Matter Concentrations in Urban Chinese Cities, 2005-2016: A Systematic Review. *Int J Environ Res in Public Health* 2017, 14, 191.
3. Ban J, Huang L, Chen C, Guo Y, **He MZ**, Li T: Integrating New Indicators of Predictors that Shape the Public's Perception of Local Extreme Temperature in China. *Science of the Total Environment*. 2016.



# SEA: Students for Environmental Action

Dear EHS family,

The Executive Board of Students for Environmental Action (SEA) is excited about our upcoming events this semester. This year, we are continuing SEA's goal of promoting sustainability both on and off the CUMC campus. Following discussions in the fall regarding CUMC waste reduction, we have focused our efforts on taking steps to introduce composting to CUMC. We are currently working on developing a pilot composting audit to help inform future planning of this initiative.

This Earth Day, we'll be heading downtown with One Health Initiative to participate in the [March for Science in New York City](#). We hope you'll join us in making our voices heard in support of scientists around the world who oppose the portrayal of science as a partisan issue and in support of science communication to the public. We plan to host a Crafternoon the week before the March to prepare poster materials.

The theme for this semester's SEA of Thoughts was environmental policy and activism in the coming years. On April 15th, SEA and FPOP spent the day gardening at Harlem Grown, a local nonprofit dedicated to promoting healthy and sustainable food access to communities through urban gardening.

We are also open to forming subcommittees on other sustainability-related initiatives that interest our members. Please feel free to reach out to us on our [Facebook page](#) or via [OrgSync](#) with your ideas, and we look forward to seeing you all at our events in the next couple of months! Thank you all for your continued support!



Best,

*Natasha Sood, Kyle Colonna, Cassandra Trickett, Adriana Garcia*

The Executive Board of Students for Environmental Action



# Events

EHS faculty, students & staff  
Please join us for food,  
drinks, and holiday cheer!



**EHS HOLIDAY PARTY!**

Once again, we hope to fill the room  
with ugly holiday sweaters!

Friday, December 9, 2016  
4pm to 6pm  
ARB 1101

WE HOPE TO SEE YOU THERE IN YOUR 'UGLIEST SWEATER'!




**EHS Spring Faculty-Sponsored Social**

Friday, February 3rd  
4pm to 6pm  
ARB 1101

Catch up with fellow EHSers  
and faculty while enjoying  
some snacks and drinks!



**Annual EHS Alumni Panel**

Wednesday, March 29<sup>th</sup>, 2017  
11:30a-12:50p  
ARB 1101

Learn about the amazing things our alumni have been  
doing since they graduated!

\*MPH 1<sup>st</sup> and 2<sup>nd</sup> years must attend  
EHS faculty and Doctoral students are invited!

This Year's Panelists:

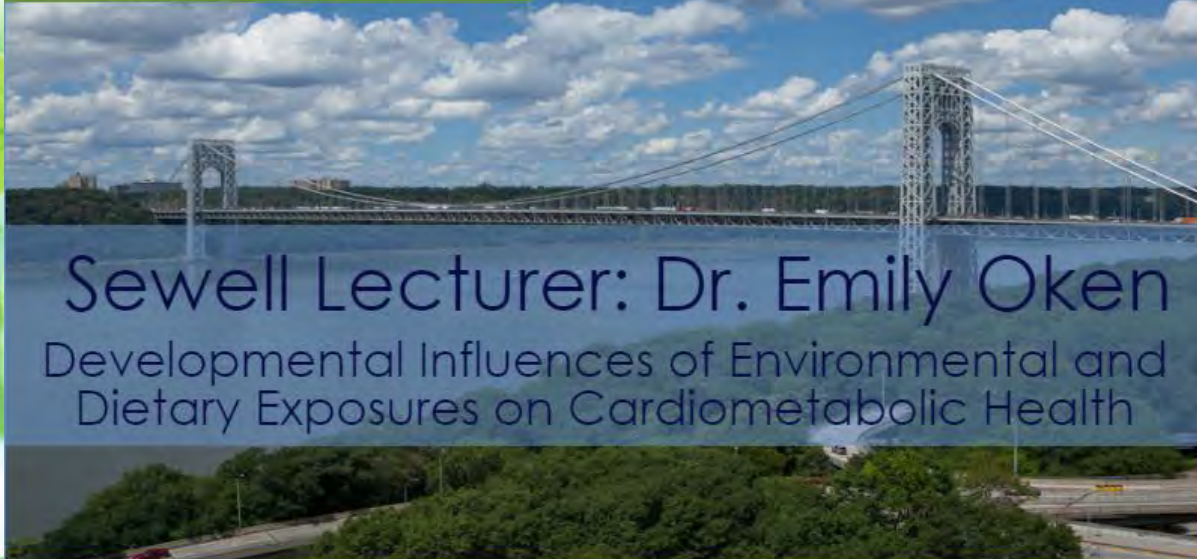
Jonathan Sury Molecular Epidemiology, 2008 Project Director, Communications & Field Operations National Center for Disaster Preparedness	Valerie Richards Toxicology, 2016 Environmental Health and Safety Specialist Consulting & Testing Services, Inc.
Dr. Tiffany Sanchez PhD in Environmental & Health Sciences, 2011/2016 Post-doctoral Student Dr. Ana Blyden Acosta's Lab	Christopher Prociak Environmental Health Policy, 2010 Environmental Health and Safety Professional Columbia University





# Future Events: Sewell Lecture

Thursday, April 20th  
4:00 PM - 5:30 PM  
ARB 8th Floor Auditorium



Sewell Lecturer: Dr. Emily Oken  
Developmental Influences of Environmental and  
Dietary Exposures on Cardiometabolic Health

## Twenty-Fourth Granville H. Sewell Distinguished Lecture in Environmental Health Sciences

Dr. Emily Oken's research explores the influence of nutrition, environmental chemicals, and other modifiable factors during pregnancy and early childhood on long-term maternal and child health, especially cardiometabolic health, asthma and cognitive development. She is a Professor and Vice President of the Department of Population at Harvard Medical School.

Named in honor of one of the School's most revered longtime faculty members, the annual Sewell Lecture recognizes significant achievement in the area of environmental health sciences.





# Future Events: End of the Year Party



## End of the Year Party RSVP

Hosted by: Drs. Graziano &  
Gamble

Students, staff, and faculty, please  
check your inbox for event details  
and RSVP!





Congratulations to all of our  
EHS 2017 graduates!  
We wish you the best in your  
future endeavors!



Spring 2017 EHS Newsletter

Created & Designed by: Mayra Cruz

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If you have questions, comments, or news to share, please contact Nina Kulacki at [NinaKulacki@Columbia.edu](mailto:NinaKulacki@Columbia.edu) or visit our website.