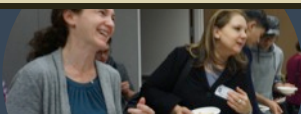


# Environmental Health Sciences Mailman School of Public Health

Department Newsletter  
Fall 2015

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# Letter from the Chair



**Dr. Tomas Guilarte, PhD**

**Leon Hess Professor & Chair**

Dear EHS Students, Faculty, and Alumni,

The Fall Semester is an invigorating time of the year with many changes. New students are excited about taking on new challenges and beginning to get familiar with the school, professors, and fellow students. There is a hustle and bustle in the hallways and classrooms that provide a new energy to the school, and the weather is changing with leaves taking on beautiful hues and a bit of chill in the air. Fall is a wonderful time of the year because it exudes change for a new season and for new things to come. Change is an inevitable part of life and as you know this is going to be my last letter as Chair of the Department of Environmental Health Sciences at the Mailman School of Public Health. So, change has also come to my life and I am embracing the new challenges and opportunities. My time at Columbia has been productive and exciting and I have had the privilege to participate in developing an outstanding and financially sound department and school that will be successful for many years to come. I am grateful to all of those that have participated in producing change for the advancement of the department and school. Wishing the Environmental Health Sciences family much success and a bright future.

Cheers,

A handwritten signature in black ink, appearing to read 'Tomas Guilarte'.

Fall 2015 EHS Newsletter

Created & Designed by: **Robyn Lee**

Copy Editors: **Meghan Kiernan & Nina Kulacki**

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.

# Faculty Spotlight

## Dr. Julie Herbstman

Dr. Julie Herbstman is an Assistant Professor in the Environmental Health Sciences Department at the Mailman School of Public Health, Columbia University. Formally trained as an epidemiologist, Dr. Herbstman's research focuses on the impact of prenatal environmental exposures.



For the past 15 years, Dr. Julie Herbstman has been studying the impact of prenatal exposure to flame retardant compounds that are commonly used in many household and consumer products. Across the country, chemicals including the phased-out polybrominated diphenyl ethers (PBDE) have been added by the pound to upholstered furniture, carpet padding, and children's products to make them compliant with a California-based flammability standard TB-117 despite little evidence that the flammability standard effectively prevents furniture fires. Dr. Herbstman and others have been studying the developmental toxicity of these compounds by measuring flame retardant chemicals in umbilical cord blood and following children longitudinally so they could be tested annually for developmental milestones. Using this methodology, Dr. Herbstman and her collaborators have found that children exposed prenatally to PBDE have, on average, lower IQs and more attention problems than their less exposed peers.

Recently, due to sustained efforts from citizens, scientists, advocates, and other stakeholder groups, TB-117 was updated and replaced by a new standard TB-177-2013, which does not require the use of chemical flame retardants. As a result, couches and other upholstered furniture that are chemical-free are widely available for purchase (for a partial list, see: <http://www.nrdc.org/health/flame-retardants/files/safer-sofas-FS.pdf>). Still, many of us have older couches and other products in our homes that contain PBDE and other chemicals used as flame retardants whose toxicity is largely unknown. People are exposed to PBDE and current use flame retardants through the accidental ingestion of dust containing these chemicals that have migrated out of the furniture or product to which they were initially applied.



Dr. Herbstman and her colleagues are currently conducting a study to determine whether individual-level behavior changes in cleaning and handwashing behaviors can reduce exposure to flame retardants. Among 32 participants of the Sibling-Hermanos Study, a longitudinal birth cohort followed within the Columbia Center for Children's Environmental Health, this team is testing whether increased hand-washing, increased house-cleaning, or both can reduce exposure to flame retardants. In their pilot testing, the team found that washing with soap and water (anywhere between 5 and 20 seconds) was more effective at removing flame retardants from the surface of hands than using a baby wipe, hand sanitizer or washing with water alone. "We hope that this study will demonstrate that there are relatively easy steps that a regular person can take to reduce their exposure," Dr. Herbstman notes.



# Awards, Publications, and Presentations

## Dr. Frederica Perera, Recipient of Jean and Leslie Douglas Pearl Award

Frederica Perera, DrPH, PhD, Mailman School Professor of Environmental Health Sciences and Director of the Columbia Center for Children's Environmental Health, was awarded the second annual Jean and Leslie Douglas Pearl Award of 2014 by the Cornell Douglas Foundation for her pioneering work in the field of molecular epidemiology. The award ceremony was held in Washington D.C. in April, 2015.



The Journal of Nutrition has selected **Dr. Mary Gamble and Dr. Brandilyn Peters'** (PhD, 2014) article, "Low-Dose Creatine Supplementation Lowers Plasma Guanidinoacetate, but not Plasma Homocysteine, in a Double-Blind, Randomized, Placebo-Controlled Trial" as the Editor's Pick for Volume 145 Issue 10 of the journal.

The article is featured at <http://jn.nutrition.org>, and in the member newsletter, which will be e-mailed to the ASN membership and published at <http://www.nutrition.org/publications/asn-electronic-newsletters/>



## Dr. Diane Re Recipient of the 2015 Calderone Prize

Diane Re, PhD, is an Assistant Professor in Environmental Health Sciences. Dr. Re aims to reveal potential similarities between two debilitating and currently untreatable conditions, organophosphate-induced delayed neuropathy (OPIDN) and amyotrophic lateral sclerosis (ALS).



The Calderone Junior Faculty Prize is an award that honors Frank A. Calderone's career and commitment to public health and is supported by an endowment from the Calderone family. Awardees are chosen based on the scientific merit of their research and its significance for public health, as well as the impact of this award on their future careers.



In July 2015, **Caitlin Howe** (PhD candidate) won first place for her poster presentation at the International Conference on One Carbon Metabolism and Homocysteine in Nancy, France titled "One-carbon Metabolism Indices, Folic Acid Supplementation, and Post-translational Histone Modifications in Bangladeshi Adults". Caitlin also received an F31 Fellowship from the National Institute of Environmental Health Sciences (NIEHS).

**Whitney Cowell, Tiffany Sanchez, and Ashlinn Ko Quinn (PhD candidates)** presented at the International Society for Environmental Epidemiology (ISEE) 2015 conference in Sao Paulo, Brazil.



Below are their research titles:

**Prenatal Exposure To Polybrominated Diphenyl Ethers And Child Behavior At 3-7 Years**

Whitney J. Cowell - Columbia University; Andreas Sjodin - Centers For Disease Control And Prevention; Richard Jones - Centers For Disease Control And Prevention; Sally A. Lederman - Columbia University; Virginia Rauh - Columbia University; Julie B. Herbstman - Columbia University;

**Arsenic Exposure And Nonmalignant Respiratory Disease: A Systematic Review Of The Epidemiological Evidence**

Tiffany R. Sanchez - Columbia University; Matthew S Perzanowski - Columbia University; Joseph H. Graziano - Columbia University;

**Residential Temperature, Humidity, And Heat Stress Symptoms: Results From A Pilot Study Of 21 Households**

Ashlinn Ko Quinn - Columbia University; Jeffrey L. Shaman - Columbia University;

**Household Air Pollution Exposure And Blood Pressure Among Pregnant Women In Rural Ghana**

Ashlinn Ko Quinn - Columbia University; Kenneth Ayuurebobi Ae-Ngibise - Kintampo Health Research Centre, Ghana; Darby W. Jack - Columbia University; Ellen Abrafi Boamah - Kintampo Health Research Centre, Ghana; Yeetey Enuameh - Kintampo Health Research Centre, Ghana; Mohammed Nuhu Mujtaba - Kintampo Health Research Centre, Ghana; Steven N. Chillrud - Columbia University; Blair J. Wylie - Massachusetts General Hospital And Harvard Medical School; Seth Owusu-Agyei - Kintampo Health Research Centre, Ghana; Patrick L. Kinney - Columbia University; Kwaku Poku Asante - Kintampo Health Research Centre, Ghana

## Meghan Kiernan, MPH '16

Recipient of the John D. Solomon Fellowship for Public Service

This year Meghan was chosen for the prestigious John D. Solomon Fellowship for Public Service. Meghan is working with NYC Emergency Management where she supports program improvement in the Training, Exercises and Evaluation Division.

This is the first student fellowship with NYC devoted specifically to emergency management. The program provides ten graduate students in the New York City area with the opportunity to complete a nine-month, paid fellowship in an agency of New York City government or a nonprofit organization.



**Muhammad Parvez, DrPH**, is an Associate Research Scientist in Environmental Health Sciences. Dr. Parvez received \$1,844,057 from the National Institute of Environmental Health Sciences for the study entitled, "Arsenic Exposure, Impaired Respiratory Function, and Immunosuppression."

The World Health Organization estimates that more than 150 million people around the world are exposed to excessive amounts of naturally occurring Arsenic (As) in drinking water, including roughly 40 million in Bangladesh, a focus of our Department's research since 2000 (<http://superfund.ciesin.columbia.edu/>). Exposure to As has been associated with many adverse health effects, including non-malignant respiratory outcomes such as chronic obstructive pulmonary disease (COPD). The impact of As on lung function is hypothesized to impair immune function, thereby leading to repeated respiratory infections over the lifecourse. While the impact of As on immune function with relation to lung function has not been explored in humans, emerging animal studies have suggested disruption of the immune system as a possible mode of action. In this prospective cohort study of 630 Bangladeshi adults, the impact of long term As exposure from drinking water on respiratory outcomes and immune function will be examined. In addition, the protective role of Vitamin D on lung function will also be explored.



**Dr. Rachel Miller, MD, FAAAAI**, Professor of Medicine in Pediatrics and EHS; and Chief, Division of Pediatric Allergy, Immunology, and Rheumatology



**Dr. Mary Beth Terry, PhD**, Professor of Epidemiology and a cancer epidemiologist. She is currently leading 4 NIH grants through NCI and NIEHS.

Co-Principal Investigators Mary Beth Terry, PhD and Rachel Miller, MD, are adjunct faculty in Environmental Health Sciences. Dr. Miller and Dr. Terry were awarded a 5-year cooperative agreement (U01) through the National Institute of Environmental Sciences (NIEHS) and the National Cancer Institute (NCI) for their study entitled, "Pregnancy and Prenatal Polycyclic Aromatic Hydrocarbons and other Environmental Exposures and Breast Cancer".



# Alumni Updates



**Sunny Uppal** (MPH '10, Environmental Health Policy) was recently appointed as Senior Advisor for International Bilateral Policy and Relations with the Government of Canada's Department of the Environment. In his new role, Sunny will support Canada's relations and cooperation with key countries on environmental issues. For the past 3 years, Sunny worked as a Senior Analyst for International Climate Change Negotiations and Partnerships with Canada's Department of the Environment, where he supported the development of projects and partnerships to implement best practices to address short-lived climate pollutants such as black carbon and methane in developing countries. Sunny graduated from the Mailman School of Public Health in 2010 from the Environmental Health Policy track after which he started his career with the United Nations Office in Geneva working on air pollution and health issues prior to moving to Ottawa to work for the Canadian government.

## Hello from abroad!

**Melanie Valencia** (MPH '14, Climate and Health) is now back in her home country, Ecuador, working at Universidad San Francisco de Quito. She is both teaching and developing programs with the Office of Innovation and Sustainability. Some of the initiatives in which she is partaking include sustainability programs for the municipality in Quito, electronic waste recycling, carpooling platforms for climate change mitigation and research on the challenges of sustainability in Latin America and how to address it. She is also collaborating on research to understand the effects of climate change as it relates to the incidence of dengue cases in the Galápagos islands through a Ministry of Health program. She is especially thrilled to be able to pass on the wisdom of EHS faculty to her students and provide the support system for them to thrive in their quest to protect and remediate the environment.



# Meet Our New EHS PhD Students



Mike He

Mike received a BA in Earth & Planetary Sciences and a MHS in Environmental Health Sciences from Johns Hopkins University. He has been involved in a number of eclectic research projects, from looking at the distribution of particulate matter in different regions of China to a study of vocal hygiene and vocal handicap in conservatory level singers. Mike looks forward to working with Dr. Patrick Kinney on studying the effects of air pollution in international settings. Outside of class, Mike is an avid singer and is involved in many music groups on and off campus including the Barnard-Columbia Chorus and the New Opera Workshop. As Mike hopes to be able to say one day: "professor during the day, opera singer at night!"

Sarah Kramer

Sarah studied Biology of Global Health at Georgetown University, where she evaluated influenza control measures using contact network models. After receiving her BS, she spent a year in Berlin on a Fulbright grant, working with the Robert Koch Institute to analyze data on HIV risk behaviors among men who have sex with men. As a student at Mailman, Sarah hopes to continue using mathematical models to investigate infectious disease spread with Dr. Jeffrey Shaman, this time with a focus on environmental and climate-related factors. In her free time, Sarah enjoys reading, going to musicals, and learning to cook new dishes.



Yanelli Nunez

Yanelli is from Michoacan, Mexico; she received a BS in Biological science and a minor in Public Health from San Diego State University. Her previous research projects focused on using stem cell models to study neurodevelopmental diseases. She worked with Dr. Fred Gage in the Salk Institute where she studied the pathological phenotypes associated with Autism. Prior to joining EHS, Yanelli also served as a Health Peace Corp Volunteer in Senegal, West Africa. At Columbia University, she looks forward to continuing her studies of neuroscience while expanding her expertise to include the role that environmental contaminants play in neurodevelopmental and neurodegenerative disorders. In her free time, Yanelli enjoys running, practicing yoga, and salsa dancing.



Roheeni Saxena

Roheeni holds an MPH from the Department of Sociomedical Sciences at Columbia, and completed her undergraduate work at Wellesley College, where she majored in Neuroscience and Peace & Justice Studies. For the last several years, Roheeni has worked in Columbia's administration where she most recently held the post of Associate Director of Educational Programs at Mailman. Prior to joining Columbia, Roheeni received an Intramural Research Training Award from the National Institute of Mental Health, where she studied Autism Spectrum Disorders in the Laboratory of Behavioral Neuroscience. Roheeni looks forward to continuing her research in the field of neurotoxicology, where she plans to examine neurotoxic exposures that are differential by demographic characteristics, continuing her lifelong exploration of the intersection between health and social justice.





# Doctoral Spotlight: Research

Eliza Little



**Eliza Little**, a PhD candidate working with Dr. Jeffrey Shaman, recently submitted a paper entitled “Development and Validation of a Climate-Based Ensemble Prediction Model for West Nile Virus Infection Rates in *Culex* Mosquitoes, Suffolk County, New York”. The study found that early season (April-June) conditions were the most important factor for predicting mosquito West Nile Virus (WNV) infection rate. The significance of early conditions, well before WNV infection rates peak and spillover transmission to humans occurs, suggests predictions of WNV infection rates can be made early enough to inform vector control and public health education campaigns. Eliza is currently focusing on identifying mechanisms that determine high mosquito densities and associated health risks of a different mosquito vector, *Aedes*(*Ae.*) *albopictus*. *Ae. albopictus*, the Asian tiger, is an invasive mosquito that is not only a nuisance but capable of transmitting important arboviruses including chikungunya and dengue. At the outset, the goal is to quantify differences in the social and physical environment and assess how these attributes interact with climate to determine *Ae. albopictus* abundance. The study’s focus is in two different northeastern US cities, Baltimore, MD and New York, NY, with the hope that these differences will be informative. This fall Eliza will be presenting preliminary findings at the Baltimore Ecosystem Study Annual Meeting in Baltimore, MD.

Tiffany Sanchez



**Tiffany Sanchez**, PhD candidate, wants to better understand the extent to which early life arsenic exposure is associated with later life respiratory effects. Tiffany recently conducted a systematic review on the different ways in which arsenic is associated with respiratory health to help inform policy makers and public health researchers on the existing evidence. In short, associations between arsenic and respiratory health have been noted throughout the lifespan: in infancy, there is growing evidence that *in utero* arsenic exposure is associated with increased frequency and severity of respiratory tract infections; in childhood, evidence of respiratory symptoms also begin to appear; and in adulthood, there is consistent evidence that arsenic exposure is associated with deficits in lung function (particularly FVC) and increased reports of coughing and breathing problems. In August, Tiffany gave an oral presentation on these findings at the ISEE conference in Sao Paulo, Brazil. For her dissertation project, Tiffany is examining the relationship between different levels of lifetime arsenic exposure and lung function among a unique cohort of Bangladeshi adolescents. These 15-17 year olds have well-characterized arsenic exposure from conception to present day and some have lifetime arsenic exposure similar to that in the U.S. Although this cohort study, led by her advisor Dr. Joseph Graziano, is still recruiting participants, Tiffany is in the midst of conducting an interim analysis and will present her results this November at the Superfund Research Program meeting in San Juan, Puerto Rico.

# 2<sup>nd</sup> Year MPH Student Practicum Experience

2<sup>nd</sup> year MPH Students describe their practicum experiences and other fun highlights from their summer.



## **Julia Casciotti**

Certificate: Environmental Health Policy

Practicum Location: Washington DC

Position: Graduate Intern

Employer: US Environmental Protection Agency

I worked for the Chemical Control Division under the Office of Pollution Prevention and Toxics preparing materials for policy options related to the regulation of toxic industrial paint removers under TSCA. I also assisted in writing and presenting early guidance for the regulation of chemicals involved in hydraulic fracturing.

Fun summer activity: Went to a wedding in Peru!



## **Khristina Ipapo**

Certificate: Infectious Disease Epidemiology

Practicum Location: New York, NY

Position: Graduate Intern

Employer: NYC Department of Health

I assisted with Vision Zero, which is a new initiative created by various City Agencies, to quantify the burden of traffic crashes. I abstracted data from death certificates and traffic reports that will be used to identify risk factors for traffic-related fatalities in NYC.

Fun summer activity: I went to Boston and threw tea into the Boston Harbor.



## **Shirui Zou**

Certificate: Toxicology

Practicum Location: New York, NY

Position: Graduate Intern

Employer: Dr. Tom Hei, Columbia University

I conducted biochemical laboratory operations, and assisted to design research projects. I also completed literary reviews, data collection, and analysis.

Fun summer activity: I went to Yellowstone Park.



## **Hetali Jokhahar**

Certificate: Environmental Health Policy

Practicum Location: New York, NY

Position: Environmental Health Policy Intern

Employer: Center for Environmental Health

I evaluated the Toxic Substances Control Act and its proposal reform bills. I also worked with NYS senators and council members to pass the Child Safe Products Act.

Fun summer activity: Recorded a song

### **Meghan Kiernan**

Certificate: Environmental Health Policy

Practicum Location: New York, NY

Position: Superfund Human Health Risk Assessment Intern

Employer: US Environmental Protection Agency

I assisted in conducting human health risk assessments for Superfund sites. During the course of the summer I conducted five-year reviews to assess protectiveness of implemented remedial actions at Superfund sites; researched, analyzed and prepared a risk assessment memo using Superfund guidance documents and analyzed soil and groundwater TIC data in excel. I also wrote an internal report on the feasibility of passive samplers to measure vapor intrusion in Puerto Rico.

Fun summer activity: I saw Aladdin on Broadway.



### **Amanda Cheng**

Certificate: Environmental Health Policy

Practicum Location: Atlanta, GA

Position: Graduate Environmental Health Intern/ORISE Fellow  
Centers for Disease Control and Prevention - National Center for  
Environmental Health



This summer I interned at the CDC's National Center for Environmental Health (NCEH), in the Office of Policy, Planning and Evaluation (OPPE), which is responsible for coordinating policy, budget, and performance initiatives to support CDC's environmental health programs. I had the opportunity to work alongside staff to develop impact statements for the Environmental Public Health Tracking Network which will be used to communicate the importance of the Tracking program to Congressional members amongst others. In addition, I helped NCEH respond to a request on forming a Center-wide evaluation collaborative group, in order to create opportunities for evaluators to share information and resources with one another. I also collected information on the needs and interests of the evaluators and drafted a report of findings to help the Center plan and implement an evaluation collaborative group. As an intern in OPPE, I had the chance to see firsthand how the office walks on the boundary of science and policy. Through speaking with the staff and auditing meetings, I learned about the Center's environmental health initiatives, and observed how requests to help inform decision-making were handled. This contextual understanding of the office allowed me to see how the projects I worked on this summer supported OPPE and how the office brought environmental health research to life.

### **Chen Chen**

Certificate: Biostatistics

Practicum Location: Geneva and Switzerland

Position: Graduate Intern

Employer: Edouard Tursan d'Espaignet

I analyzed the Global Adult Tobacco Survey and the Global Youth Tobacco Survey and tried to find out relationships between prevalence data from these two datasets.

Fun summer activity: I went to Barcelona and had a lot of tasty and reasonably priced food.





## **Valorie Richards**

Certificate: Toxicology  
Practicum Location: New York, NY  
Position: Graduate Intern  
Employer: Ambient Group, Inc.

I was involved with NYC's Right to know Program which involved hazardous chemical inventories and reporting to the DEP; air and water sampling; writing reports and analyzing sample data.

Fun summer activity: Traveled to Maine and Miami to do air sampling



## **Robyn Lee**

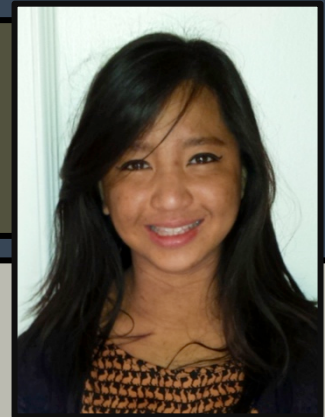
Certificate: Toxicology  
Practicum Location: Daly City, CA (SF Bay Area)  
Position: Public Health Program Evaluator and Researcher  
Employer: Breathe California, Golden Gate Public Health Partnership  
I analyzed and interpreted qualitative results from the programs and demographic data from signature programs in tobacco cessation and asthma education. My evaluation and analysis led to a three-year summary report focused on the strengths, challenges, and funding opportunities for Breathe California.  
Fun summer activity: Hiked Mt. Tam and Mt. Diablo

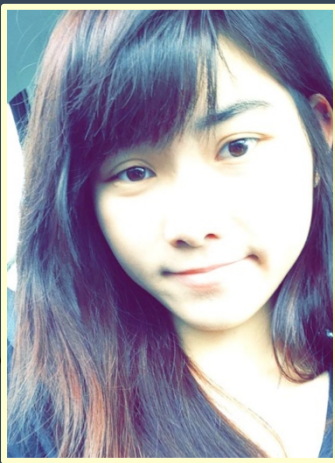


## **Alyssa Espiritu**

Certificate: Climate & Health  
Practicum Location: Cypress, CA  
Position: Brownfields and Environmental Restoration Intern  
Employer: CA Department of Toxic Substances Control

Over the summer I interned with the California Department of Toxic Substances Control (DTSC), one of the regulatory agencies under Cal/EPA. I worked on a number of small projects pertaining to Brownfield sites. One of my major responsibilities was processing Targeted Site Investigation (TSI) grant applications, where public agencies could apply for a grant from DTSC to provide an environmental assessment for Brownfields, or potentially hazardous waste sites. As part of this process, I conducted public outreach and initiated communication with city officials to bridge the gap between government agencies and the department's TSI program. In addition, I performed program evaluations and cost comparisons for the department's Voluntary Cleanup Program (VCP), assessing program proponents' satisfaction with DTSC's environmental services at their offices across California. I also reviewed the Protocol for Assessing Community Excellence in Environmental Health (PACE EH) and made recommendations for how the department could integrate this program into their current procedure of community decision-making. The internship gave me a more in-depth look into the operation of a state government agency and what stakeholders are involved in the risk assessment and site cleanup process. I witnessed interactions between the department and public agencies and communities requesting an environmental assessment and cleanup, and learned about the important role that environmental justice plays in the hazardous waste decision-making process.





### **Ka Lon Wang**

Certificate: Biostatistics

Location: New York, NY

Position: H RTP Intern

Employer: New York Department of Health and Mental Hygiene  
I worked on genotyping and sequencing HIV-1. In addition I performed quality assurance and control in clinical virology testing and assay development.

Fun summer activity: Going to the beach

### **Amy Nematollahi**

Certificate: Toxicology

Practicum Location: New York, NY

Position: Project Coordinator

Employer: Columbia Center for Children's Environmental Health: Dr. Julie Herbstman

I am helping with planning and implementing a study that looks at flame retardant exposure in families in Upper Manhattan/South Bronx, and ways that families can reduce their exposure to these chemicals.

Fun summer activity: I got married!



### **Tuan Tran**

Certificate: Toxicology

Practicum Location: Hanoi, Vietnam

Position: Data Analyst

Employer: Dr. Duong Khanh Van

I analyzed data regarding the workers' health at a shipyard company from 2006-2009 in Vietnam using Stata. I also assisted in designing, reporting and analyzing hospital survey form using Epidata, SPSS and Stata.

Fun summer activity: Since I was in Vietnam, I decided to take a trip to Thailand with my friends.

### **Jalisa Gilmore**

Certificate: Climate & Health

Practicum Location: New York, NY

Position: Project Officer

Employer: ARCHIVE Global

I did public health research on different projects for the organization. I also worked on a publication related to sustainability, housing, and health.

Fun summer activity: I went to The Wizarding World of Harry Potter.





### **Laura Buckley**

Certificate: Climate & Health

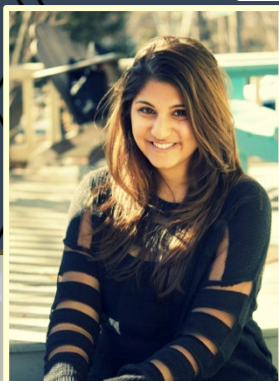
Practicum Location: Washington DC

Position: Global Health and Development Intern

Employer: The Aspen Institute

I researched and wrote on the intersections of sustainable development, climate change mitigation, and reproductive health. I also prepared talking points and questions for panel events on reproductive health and the SDGs, and I assisted in the production of a food security blog series. [Additionally, I spent ample time preparing battle strategies against the cockroaches in my sublet whilst reflecting on how much cockroach allergen I was inhaling on a daily basis and what this might mean for future allergic sensitivities if I were at an earlier stage of development].

Fun summer activity: Explored a new city and read something outside of a research journal!



### **Natasha Jhala**

Certificate: Toxicology

Practicum Location: New York, NY

Position: Research Assistant

Employer: Dr. Manuela Orjuela - Columbia University

Over the summer I worked with Dr. Manuela Orjuela, a Pediatric Oncologist and faculty member in the Epidemiology Department at Mailman, on her study COMIDITA, which focused on nutrition, folate intake, and development in children two years of age. In COMIDITA, we primarily worked with low income, low literacy Hispanic populations in the Washington Heights area, many of whom participated in the Head Start program. I interviewed families in Spanish, and administered questionnaires regarding the parents' and child's diet and nutrient intake (Food Frequency Questionnaire [FFQ] and 24 Hour Recall). From my analysis of the data, I created an easy-to-read document with each of the food categories, measuring how the child's dietary practices fared in each category. After several interviews, we discovered a common practice for these families: making hot Jello in plastic containers. This discovery prompted the creation of a user-friendly BPA fact sheet in Spanish and motivated our Primary Investigators to provide families with Pyrex glass bowls to replace these plastic containers. In addition, we accompanied families to appointments and collected blood or saliva samples to quantitatively assess exposure. Two weeks later, children were given a Bayley Scale of Infant and Toddler Development Third Edition Exam by Dr. Helene Duch to assess their neurocognitive skills. The FFQ and 24 Hour Recalls, as well as age appropriate neurocognitive exams will be conducted again for these children at 30 and 36 months. Furthermore, this study has prompted us to compare the fortification levels of Hispanic and US flour levels. We plan to investigate the varying folic acid fortification levels that may affect accuracy in nutrient intake important to a nutrition epidemiological study. I plan on continuing to participate in this research to complete my thesis.

### **Cara Smith**

Certificate: Climate & Health

Practicum Location: New York, NY

Position: Project manager

Employer: Columbia University - Steve Chillrud and Darby Jack  
Organized, set up, and deployed participants with equipment to complete a biking study on air pollution exposure and cardiovascular indicators. I also uploaded data and made maps, and hung out with my dog.

Fun summer activity: Went to Gov Ball





## **Fatima Riaz**

Certificate: Global Health  
Practicum Location: Pakistan  
Position: Consultant  
Employer: World Bank and IRC

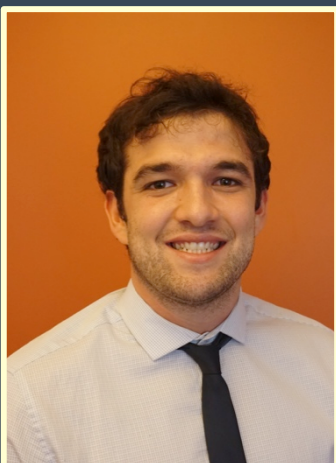


As the only EHS 2016 student in the Global Health certificate, my internship is presently based in Pakistan where I am working as a Consultant with the World Bank and a Research Assistant with the International Rescue Committee (IRC). I have been working with the Water and Sanitation Program (WSP) which is a multi-donor partnership by the World Bank to support a low income population in obtaining affordable, safe and sustainable access to drinking water and sanitation services. I developed survey questionnaires and applications, WASH-related health manuals, and conducted data analysis to scale up water delivery as well as wrote blogs and designed infographics to document the progress Pakistan has made towards the water MDG since 1990. In the sanitation sector, I spearheaded the analysis portion for a mega project between the World Bank and the Government of Azad Jammu and Kashmir province. I developed wealth quintiles for 28,000 households and conducted a multivariable analysis that gleaned the relationship between education, wealth and waterborne disease incidence in about 1,600 villages and 10 districts. My findings are currently being used to inform policy and planning action for the upcoming years.

The second half of my practicum is with the International Rescue Committee and the Creating Opportunities through Mentoring, Parental Involvement and Safe Spaces project (COMPASS). Acknowledging the vulnerabilities of adolescent girls in humanitarian contexts, COMPASS aims to prevent gender-based violence through empowering young girls and garnering support from caregivers and mentors. I am supporting the local COMPASS team in monitoring, evaluation and capacity building, as well as assisting preparation of the baseline assessment.

## **Richard Evoy**

Certificate: Toxicology  
Practicum Location: Bellevue, Washington  
Position: Research Assistant  
Employer: Veritox, Inc



I helped write a 10-page review on fluoride toxicity for a pharmaceutical company that was moving into human trials for a drug that contained high levels of fluoride.

Fun summer activity: I volunteered at an outdoor concert venue at a recycler/composter and saw a ton of free shows.

## **Yameng Luan**

Certificate: Toxicology  
Practicum Location: Karlstad, Sweden  
Position: Research Assistant  
Employer: Prof. Bornehag, Karlstad University

I collected answers from over 1,200 questionnaires and analyzed the data to see the effects of mother's stress status during pregnancy and endocrine disruption on children's development.

Fun summer activity: Learning Swedish



# Meet Our EHS MPH Class of 2017

Please welcome our first year EHS Master of Public Health students. They are an enthusiastic group of students who came to Mailman from around the world.

In this section, first years answer:

- ❖ Where they're from
- ❖ An interesting fact about themselves.
- ❖ And the age-old question: If you were an animal, what would you be?



## Jimmy Deats

Spring Valley, NY  
Global Health

I was in the 2004 version of the Manchurian Candidate with my marching band.

Otter

## Millie Tung

Kaohsiung, Taiwan  
Climate and Health

I started playing the piano when I was 4 years old, and I like music a lot. My biggest goal is to watch every possible Broadway show while I'm in NYC!

Pink Dolphin



## Shanna Keown

New York, NY  
Climate and Health

I once saw gorillas in the wild.

Dolphin

## Katrina Lu

Westchester County, NY  
Undeclared

I once met Jack Gleeson, the actor who plays Joffrey Baratheon on "Game of Thrones", on a random street in NYC.

Direwolf







**Yuting Deng**

China  
Applied Biostatistics

I have two birthmarks on my face.

Eagle

**Melissa Robbins**

Montvale, NJ  
Undeclared

I spent a week sailing around Croatia's Dalmatian Coast this summer and cliff jumped from a 60-ft high submarine base.

Panda



**Mayra Cruz**

Houston, TX  
Climate and Health

I shook hands with Usher and Bill Clinton during CGIU (Clinton Global Initiative University).

Puffin

**Jeremy Brooks**

Rockville, MD  
Environmental Health Policy

I'm a black belt in Tae Kwon Do.

Dolphin



**Vicki Fung**

Canton, MI  
Toxicology

My first name is just Vicki - not short for Victoria.

Penguin

**Abby Gaylord**

Saratoga Springs, NY  
Toxicology

I am obsessed with documentaries.

Elephant



**Carisse Hamlet**

New City, NY  
Global Health

I made eye contact with Michele Obama at the 2013 Presidential Inaugural Parade.

Elephant

**Emma Krasovich**

Oak Park, CA  
Global Health

I've seen a show in the Sydney opera house and it was amazing!

Kangaroo



**Mijie Lee**

Singapore  
Global Health

It's a challenge to wake up for classes on time.

Sloth

**Sara Zufan**

Chicago, IL  
Infectious Disease Epi

I wrote a paper on the negative impacts of rap music on the environment. It was highly praised by my teacher, poorly received by my peers.

Fruitbat







**Ragini Kathail**

Palo Alto, CA  
Global Health

I like pretending I can make things from really glamorous food blogs. Sometimes I even succeed!

An otter!

**Jinjin Wu**

China  
Toxicology

I have one cat and two dogs in my home.

Polar bear



**Sandra India Aldana**

Zaragoza, Spain  
Applied Biostatistics

I run marathons.

Dolphin

**Maggie Rice**

Milwaukee, WI  
Climate and Health

Last summer I did a trek to Mount Everest Basecamp.

Wolf



**Tina Wang**

Qingdao, China  
Climate and Health

I curse a lot but it doesn't mean I hate everything.

Macaca Nigra monkey

**Sasha Berns**

Westport, CT  
Toxicology

In high school, I started a company called "Soil Yourself Composting".

Aye Aye



**Chu Qian**

Jiangsu, China  
Global Health

I'm a big fan of Bhutan, come talk to me if you're also interested.

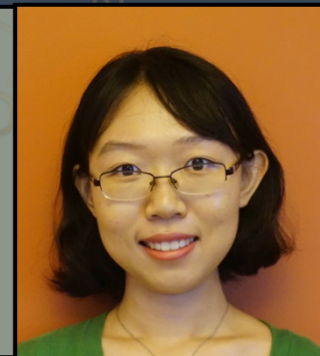
Squirrel

**Aria (Xiaochi) Quan**

Beijing, China  
Toxicology

All of the foods that I disliked when I was a child finally turn into my favorite.

Cat



**Myla Ramirez**

Haledon, NJ  
Environmental Health Policy

Half my family lives in Italy.

Gazelle

**Christina Oibrantz**

Madison, WI  
Environmental Health Policy

I can (sadly) identify 200 birds by their calls.

Blue Whale



# PrIMER

This past summer, the Department of Environmental Health Sciences at the Mailman School of Public Health launched the **Program to Inspire Minority undergraduates towards Environmental health sciences Research (PrIMER)**. This NIEHS-funded program provides students, who are typically underrepresented in STEM fields, the opportunity to gain valuable research experience in environmental health sciences.



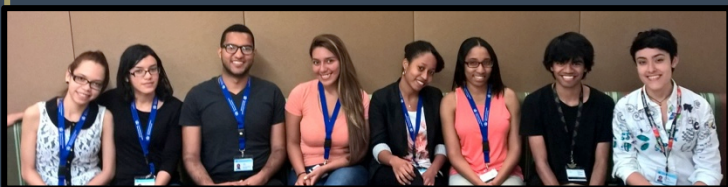
PrIMER participants receive a stipend and commit to a two-year program beginning in the summer between their sophomore and junior year. All eight of this year's students are undergraduates at John Jay College for Criminal Justice, majoring in forensic science with concentrations in Toxicology, Criminalistic & Molecular Biology, and Molecular Biology. Students are paired with an EHS faculty member, who serves as an academic and research project mentor throughout the program.

Over the summer, PrIMER provided participants with the opportunity to work full-time in an academic environment where they developed research skills, collaborated with other students and faculty, and honed their public speaking skills. Students explored diverse topics in environmental health sciences, including analysis of dopamine concentrations in lead-exposed animals, measurement of the effects of air particulate matter on cardiovascular health of cyclists, and assessment of the effectiveness of biomarkers in predicting breast cancer. Furthermore, students learned how to design studies, perform an array of laboratory and analytical techniques, and collect and analyze data. At the end of the summer, students presented their findings at the PrIMER Research Showcase.

In addition to their projects, PrIMER students participated in professional enrichment seminars featuring Dean Linda Fried, Dean Marlyn Delva, our esteemed EHS faculty members, and doctoral students. These seminars provided information on the graduate school application process and career opportunities in the field of public health.

Dr. Joseph Graziano and Dr. Greg Freyer, Co-Directors of PrIMER, with Nina Kulacki, PrIMER Program Administrator, have sought to develop PrIMER into an enriching experience that extends beyond skill building. Ultimately, the goal is to uncover the students' potential as scientists, with the hope that they will pursue higher degrees in environmental health.

Since the start of this academic year, PrIMER students have continued to work part-time on their research projects. PrIMER seniors have also begun GRE prep courses, another benefit of the program. In addition, PrIMER students are encouraged to maintain their relationships with graduate students at Mailman. With the help of their John Jay PrIMER advisor, Dr. Lissette Delgado-Cruzada, many students plan to attend conferences, with the opportunity to present their posters at the Health and Justice Forum at John Jay in November 2015.



With the success of this year's PrIMER program, we look forward to continually developing this program and fulfilling our ultimate goal of providing students with experiences essential for them to pursue further education and careers in environmental health sciences.



# Students for Environmental Action (SEA)

Dear EHS,

The mission of Students for Environmental Action is to promote sustainable practices and environmental education around CUMC and the surrounding community. We have built our membership tremendously, and continue to receive unwavering support from the students and faculty in this department. We are thrilled to share some of the events and initiatives SEA has undertaken in the past year in pursuit of these goals.

Spearheaded by Meghan Kiernan, SEA has taken on the ever-present issue of recycling on campus. We conducted an inventory of the Mailman recycling infrastructure and compiled recommendations on how to better standardize receptacles and signage around the building to improve correct usage. We continue to work with Facilities Management to implement these proposed changes, and plan on integrating them with recycling education through orientation materials, tabling, and social media.



For the second semester in a row, we have brought students to volunteer with Harlem Grown, a community garden that works with local youth to instill education in food sustainability and nutrition. Through this partnership, we have assisted in cleaning the garden, preparing soil beds for planting in the spring, and maintaining the hydroponic garden in the winter.

This year we are also continuing the tradition of SEA of Thoughts, a panel that brings together two professors from different disciplines to speak on an environmental health issue, drawing on their respective backgrounds and research. Past panels have included: "Climate Change and Global Food Security," with Dr. Glenn Denning and Dr. Greg Freyer, and "Infectious Disease, Climate, and Health," with Dr. Jeff Shaman and Dr. Steven Morse.

At the most recent general body meeting, members showed great interest in pursuing new initiatives, including the creation of a sustainability map detailing water filling stations, green space, bike racks, and recycling receptacles and recycling information for orientation. We look forward to seeing what they accomplish in 2016. On that note, we are pleased to introduce the 2016 SEA Executive Board:

President: Sara Zufan  
VP of Communications: Joanna Xing  
VP of Finance: Jeremy Brooks  
VP of Outreach: Sasha Berns  
VP of Events: Maggie Rice

Thank you for your continued support and enthusiasm!

Sincerely,

*Julia, Meghan, Cara, Robyn, and Val*

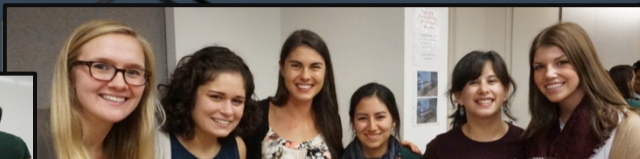
The 2015 SEA E-Board





# Events

## Past Events



**Save the date!**  
**Faculty Sponsored Social**  
Friday, September 25  
4pm to 6pm  
EHS 1101

Enjoy food, drinks, and wonderful company!

Get to know more about your faculty & peer mentors!



**THE EHS 8<sup>TH</sup> ANNUAL CHILI COOK-OFF**

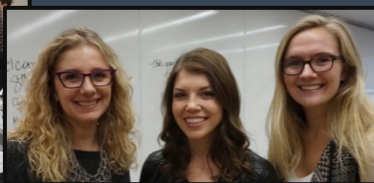
October 30<sup>th</sup>, 2015  
EHS Rm 1101  
4p-6p

Join or support your favorite team!  
Featured categories:  
Cornbread & Dessert

Feel free to dress up in your Halloween costume!

**WANTED**

**THE BEST CHILI (& cornbread & dessert) IN TOWN**



## Upcoming Event

EHS FACULTY, STUDENTS, AND STAFF: PLEASE JOIN US FOR AN EVENING OF FOOD, DRINKS, AND HOLIDAY CHEER!

THIS YEAR, WE HAVE A THEME: UGLY SWEATERS

**EHS HOLIDAY PARTY!**

FRIDAY, DECEMBER 4, 2015  
4PM TO 6PM  
ARB 1101

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

