



Spring 2020

NEWSLETTER

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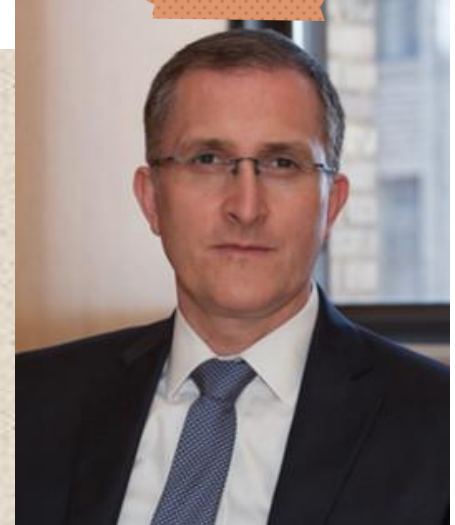


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LETTER FROM THE CHAIR

Dear EHS Family,

“Look for the helpers. You will always find people who are helping.” Those were the words spoken to televisions famed Mr. Fred Rogers by his mother when he was frightened as a child by things he saw in the news. Many of us are experiencing a new and unexpected vulnerability and I am especially inspired by the eagerness and diligence of students, scientists, clinicians, and more, coming together to combat this pandemic. A crisis like covid-19 outbreak presents complex and rapidly evolving challenges that touches many areas of life and spans across a diverse range of expertise.



It is difficult to capture this moment in history, but the actions undertaken and the tremendous job in caring for our community is inspiring. On multiple fronts we have seen students, faculty, and staff enter the fray to help. The disruption to our students and hardship they've had to overcome has been unprecedented. The Columbia University Irving Medical Center and Mailman School are working tirelessly to address the critical needs and demands placed on our students. I wish to thank our education team, Nina Kulacki, Brandy Coleman, and Dr. Greg Freyer, for their tireless energy and work in helping our students and faculty in restructuring classroom activities throughout the department.

I have the privilege of also sharing some of the work our faculty experts have been doing to better understand and respond to the COVID-19 Pandemic. Experts within the Mailman School are working with government authorities, advising CUIMC leadership, and mobilizing volunteer efforts to address the overwhelmed healthcare system workers on the frontlines. Jeffrey Shaman, Sen Pei, Wan Yang, and co-authors, published in the journal Science reported early figures for the now well-established impact of mild and asymptomatic spread of coronavirus in China and United States. Micaela Martinez and collaborators throughout CUIMC are mapping the outbreak and identifying susceptible and at-risk communities in NYC, which has quickly become the epicenter of new cases in the US.

When this pandemic is controlled, it will be up to all of us, as health communicators, to guide the future of public health in the new era of digital media. Each of us will be central in doing our part to continue our respective work and to provide accurate information as public health advocates.

Sincerely,

Andrea A. Baccarelli, MD, PhD, MPH
Leon Hess Professor and Chair
Department of Environmental Health Sciences

FACULTY



**Dr. Marianthi-Anna
Kioumourtzoglou, PhD**



Dr. Joan Casey, PhD

Drs. Kioumourtzoglou and **Casey** currently serve as the Co-Chairs for the North American Chapter of the **International Society for Environmental Epidemiology (ISEE)**. As part of their service they promote scientific research and collaboration in environmental health, engage in education, training, and bridging the gap between research and translation into public health policy.

STUDENTS

Lucy Zhao, 1st Year MPH

Lucy Zhao recently started an internship with FEMA in the Preparedness Division. She is working in the Region II office at One World Trade creating emergency preparedness and prevention materials. Currently, the Preparedness Division is focusing on the recent earthquakes in Puerto Rico as well as the novel coronavirus.

Haleigh Cavalier, 2nd Year MPH

Haleigh was invited to attend the 2020 CDC Epidemic Intelligence Service Research Conference in May along with her research mentor, Dr. Karen Alroy, DVM, MPH and Epidemic Intelligence Service Officer. She has been working closely with Karen and other colleagues throughout her internship at the NYC Department of Health and Mental Hygiene, on a project about gentrification and mental health in New York City. The research is currently in the running for the J. Virgil Peavy Memorial Award. This award recognizes a current EIS officer for the oral presentation that best exemplifies the effective and innovative application of statistics and epidemiologic methods in an investigation or study.

ALUMNI

Anne Seeley, MPH '86

At the NYCDEP/Water Supply for over 30 years, Anne continues to work on drinking water & public health issues. She is co-author on a [paper](#) just published, which came out of a partnership program with NYCDOHMH. She gave a talk in February on water supply & public health in NYC's early history.

Syd Wolchok, MPH '19

Syd is completing her first year of law school at Brooklyn Law School. Over the summer, she'll work at the EPA Region 2 office in their air branch where she's excited to continue her interest in environmental justice and climate change. She credits Dr. Hoang's Environmental Justice class as her main source of inspiration and knowledge.

GRANTS & AWARDS

- **Ricky Perera, PhD and Julie Herbstman, PhD** received the award titled "To Maintain and Enrich Resource Infrastructure for Existing Environmental Epidemiology Cohorts" from the National Institutes of Health (R24)
- **Diane Re, PhD** received the award titled "Brain-derived extracellular vesicles as a novel source of biomarkers for disease progression and environmental exposure in ALS" from the National Institutes of Health (R01)
- **Jeffrey Shaman, PhD** received the award titled "Suicide as a Contagion: Modeling and Forecasting Emergent Outbreaks" from the National Institutes of Health (R01)

PUBLICATIONS

[Low-Moderate Arsenic Exposure and Respiratory in American Indian Communities in the Strong Heart Study.](#) Powers M, **Sanchez TR**, Grau-Perez M, Yeh F, Francesconi KA, Goessler W, George CM, Heaney C, Best LG, Umans JG, Brown RH, **Navas-Acien A**. Environ Health. 2019 Nov 28;18(1):104. doi: 10.1186/s12940-019-0539-6. PMID: 31779614

[A Custom-built Low-Cost Chamber for Exposing Rodents to e-cigarette Aerosol: Practical Considerations.](#) **Hilpert M**, Ilievski V, **Coady M**, Andrade-Gutierrez M, Yan B, Chillrud SN, **Navas-Acien A**, **Kleiman NJ**. Inhal Toxicol. 2019 Dec 4:1-10. doi: 10.1080/08958378.2019.1698678. [Epub ahead of print] PMID: 31797690

[Transcriptomic Responses in Mouse Blood During the First Week After in Vivo Gamma Irradiation.](#) Paul S, **Kleiman NJ**, Amundson SA. Sci Rep. 2019 Dec 4;9(1):18364. doi: 10.1038/s41598-019-54780-0. PMID: 31797975

[Identifying Novel Genetic Markers Through Transcription-Wide Association Study: Can This Be A Path To Reducing The Burden of Pancreatic Cancer?](#) Genkinger JM, Su GH, **Santella RM**. J Natl Cancer Inst. 2020 Jan 9. pii: djz247. doi: 10.1093/jnci/djz247. [Epub ahead of print] No abstract available. PMID:31917439

[The Exposome and Health: Where Chemistry Meets Biology.](#) Vermeulen R, Schymanski EL, Barabási AL, **Miller GW**. Science. 2020 Jan 24;367(6476):392-396. doi: 10.1126/science.aay3164. Review. PMID: 31974245

PUBLICATIONS

[Lung Function and Respiratory Symptoms after Tuberculosis in an American Indian Population. The Strong Heart Study.](#) Powers M, **Sanchez TR**, Welty TK, Cole SA, Oelsner EC, Yeh F, Turner J, O'Leary M, Brown RH, O'Donnell M, Lederer D, **Navas-Acien A**. Ann Am Thorac Soc. 2020 Jan;17(1):38-48. doi:10.1513/AnnalsATS.201904-281OC. PMID: 31553638

[Trends and Patterns of Phthalates and Phthalate Alternatives Exposure in Pregnant Women from Mexico City during 2007-2010.](#) Wu H, Kupsco AJ, Deierlein AL, Just AC, Calafat AM, Oken E, Braun JM, Mercado-Garcia A, Cantoral A, Téllez-Rojo MM, Wright RO, **Baccarelli AA**. Environ Sci Technol. 2020 Jan 24. doi: 10.1021/acs.est.9b05836. [Epub ahead of print] PMID: 31944681

[Modification of the Effects of Prenatal Manganese Exposure on Child Neurodevelopment by Maternal Anemia and Iron Deficiency.](#) Kupsco A, Estrada-Gutierrez G, Cantoral A, Schnaas L, Pantic I, Amarasiriwardena C, Svensson K, Bellinger DC, Téllez-Rojo MM, **Baccarelli AA**, Wright RO.

[The Association Between Perfluoroalkyl Substances and Lipids in Cord Blood.](#) Spratlen MJ, **Perera FP**, Lederman SA, Robinson M, Kannan K, **Herbstman J**, Trasande L. J Clin Endocrinol Metab. 2020 Jan 1;105(1). pii: dgz024. doi: 10.1210/clinem/dgz024. PMID:31536623

PUBLICATIONS

[MicroRNA-Based Risk Scoring System to Identify Early-Stage Oral Squamous Cell Carcinoma Patients at High-Risk for Cancer-Specific Mortality.](#) Yoon AJ, Wang S, Kutler DI, Carvajal RD, Philipone E, Wang T, Peters SM, LaRoche D, Hernandez BY, McDowell BD, Stewart CR, Momen-Heravi F, **Santella RM**. *Head Neck*. 2020 Jan 25. doi: 10.1002/hed.26089. [Epub ahead of print] PMID: 31981257

[The Future of Careers at the Intersection of Climate Change and Public Health: What Can Job Postings and an Employer Survey Tell Us?](#) Krasna H, Czabanowska K, Jiang S, Khadka S, Morita H, Kornfeld J, **Shaman J**. *Int J Environ Res Public Health*. 2020 Feb 18;17(4). pii: E1310. doi: 10.3390/ijerph17041310. PMID: 32085475

[Rice Intake, Arsenic Exposure, and Subclinical Cardiovascular Disease Among US Adults in MESA.](#) **Sobel MH, Sanchez TR**, Jones MR, Kaufman JD, Francesconi KA, Blaha MJ, Vaidya D, Shimbo D, Gossler W, **Gamble MV**, Genkinger JM, **Navas-Acien A**. *J Am Heart Assoc*. 2020 Feb 18;9(4):e015658. doi: 10.1161/JAHA.119.015658. Epub 2020 Feb 6. PMID: 32067593

[Associations of Maternal Arsenic Exposure with Adult Fasting Glucose and Insulin Resistance in the Strong Heart Study and Strong Heart Family Study.](#) Tinkelman NE, Spratlen MJ, Domingo-Relloso A, Tellez-Plaza M, Grau-Perez M, Francesconi KA, Goessler W, Howard BV, MacCluer J, North KE, Umans JG, Factor-Litvak P, Cole SA, **Navas-Acien A**. *Environ Int*. 2020 Feb 11;137:105531. doi: 10.1016/j.envint.2020.105531. [Epub ahead of print] PMID:32059145

PUBLICATIONS

[Mitochondria and Aging in Older Individuals: An Analysis of DNA Methylation Age Metrics, Leukocyte Telomere Length, and Mitochondrial DNA Copy Number in the VA Normative Aging Study.](#) Dolcini J, Wu H, Nwanaji-Enwerem JC, **Kiomourtozlogu MA**, Cayir A, Sanchez-Guerra M, Vokonas P, Schwarz J, **Baccarelli AA**. Aging (Albany NY). 2020 Feb 2;12(3):2070-2083. doi: 10.18632/aging.102722. Epub 2020 Feb 2. PMID:32009007

[Gasoline Vapor Emissions During Vehicle Refueling Events in a Vehicle Fleet Saturated With Onboard Refueling Vapor Recovery Systems: Need for an Exposure Assessment](#) **Shearston, J.**, and **M. Hilpert**. Environmental Epidemiology 3 (2019): 363.

[Household fuel mixes in peri-urban and rural Ecuador: Explaining the context of LPG, patterns of continued firewood use, and the limitations of induction cooking](#) **Gould, C.F.**, Schlesinger, S., Molina Rueda, E., Bejarano, M.L., Valarezo, A., **Jack, D.W.** Energy Policy 136 (2020): 1-13.

FACULTY

Dr. Ricky Perera, PhD, DrPH, MPH

The National Institute of Environmental Health Sciences honored [Dr. Ricky Perera](#) as their 19th Annual *Spirit Lecture Award* Speaker in March 2020. The NIEHS *Spirit Lecture* award is an annual program designed to recognize highly respected, outstanding women of notable achievement.



Dr. Perera was honored for her research efforts towards biomarker development in cancer and the role of the environment in fetal development and children's health as well as her extensive community outreach, health advocacy efforts, and dedication to mentoring the next generation of scientists.

FACULTY

Jeffrey Shaman, PhD

Dr. Jeffrey Shaman was recently featured in several news outlets including the [New York Times](#) and the [Washington Post](#) discussing the role of stealth transmission in the quick spread of coronavirus. Dr. Shaman and his team have been using a computer model drawing on data from China to predict scenarios for infection spread. Dr. Shaman continues to present updates to these models and has been increasingly prominent in the media as a result of his work and the work of his team.



Deliang Tang, DrPH

Dr. Deliang Tang was quoted in a [recent article](#) from NPR discussing the important of scientific communication during the COVID-19 outbreak.



STUDENTS

Victoria Bortfeld and Haley Campbell, 1st Year MPH

First year MPH students Victoria Bortfeld and Haley Campbell attended the 15th Annual Columbia Energy Symposium 2020 in February. This year's theme was *Transforming the Energy System* in order to address the significant challenges and opportunities that decarbonization of the energy sector will present.



From left to right: Haley Campbell and Victoria Bortfeld

The event consisted of 6 different panel discussions including: Moving Towards Net-Zero Emissions, Transportation in Transition and Women in Energy Panel - Energy and Climate Policy in an Election Year. The students were able to connect such topics with their public health practice regarding the impact of transportation emissions on health, and the importance of equity and environmental justice in the transition to energy-efficient technologies. They hope to apply the knowledge gained in this experience for further considerations of the intersection between green energy infrastructure and public health.

A huge thank you to Jeet Viswanathan, Director of Energy Management and Sustainability at CUIMC, for giving these students the opportunity to attend!

STUDENTS



Yanelli Nunez, PhD Candidate

Congratulations to Yanelli Nunez, PhD candidate, for receiving the Hispanic Organization of Toxicologists Outstanding Officer Award for her two years of service as the Graduate Student Representative of the organization. During these two years, Yanelli planned mentoring activities targeted towards the professional development of graduate students and panel discussions with leaders in the field of toxicology. Some of the events took place during the 2019 Society of Toxicology (SOT) Annual Meeting in Baltimore, Maryland and more were planned for the 2020 SOT Meeting.

SPOTLIGHTS

ALUMNI



Sashti Balasundaram, MPH '08

Sashti Balasundaram, EHS 2008, (Founder, [WeRadiate](#)) won first place at the U.S. Composting Council National Conference pitch competition. This award recognized his climate-tech business, WeRadiate. WeRadiate takes the mystery out of the compost process by tracking key compost indicators, ensuring health and quality of the compost product by supporting city governments and compost facilities to reduce odors, eliminate pathogens and comply with environmental regulations.

ALUMNI

Mayra Cruz, MPH '17

Mayra was recently selected as one of [Miami's Next Leaders](#). She is the Climate Resilience Program Manager at Catalyst Miami. Mayra manages CLEAR (Community Leadership on the Environment, Advocacy, and Resilience) and HEAL (Housing, Equity, Advocacy, and Leadership), which provide trainings around social justice and community organizing around the issues of climate change and affordable housing, respectively.



Collectively, the programs have graduated over 300 leaders who are more civically engaged and advocating for resilient solutions to Miami's most pressing problems. Mayra also supports Catalyst's work around disaster preparedness and advocating for equitable resilient strategies for vulnerable communities. As a member of the Miami Climate Alliance, she advocates for access to clean energy for low-wealth communities. Mayra is passionate about addressing the social determinants of health and combating climate change from a public health perspective.



Charlene Redhead

At the 2019 [Annual Biomedical Research Conference for Minority Students \(ABRCMS\)](#), which took place in Anaheim, California, Charlene presented research conducted with her mentor Dr. Norman Kleiman as a part of the PrIMER program. Her research focused on heavy metal contamination in dog hair from animals living within the Chernobyl Exclusion Zone.

Charlene's work focused on unwashed hair samples, comparing them to controls from local NYC pets and veterinarian clinics. The primary goal of this research is to educate individuals on the heavy metal contamination problem, as they hypothesize metal contamination will have a larger impact on health outcomes, than the radioactive spread after the explosion of the reactor.

At the culmination of ABRCMS, Charlene received a recognition award for her poster, the importance of her research in public health, and her outstanding job at the conference.

Dear EHS Family,

Although our first semester as the SEA executive board has been challenged by the transition to virtual operations, we'd like to thank everyone who has taken part in our events thus far and are looking forward to creating meaningful programming in the future. We hope that you continue to stay engaged in our group! This semester, we aimed to continue SEA's goal of promoting sustainability in our CUIMC and beyond, while also aiming to participate in more intersectional activities related to environmental action.

SEA has successfully continued the pilot composting program on the EHS floor in ARB with help from SEA volunteers. Grace Chao, a first-year MPH student in the EHS department, shared, *"As a volunteer, I feel that I'm doing my part to ensure that food waste is minimalized and instead repurposed in a meaningful way."* As we continue to invest in composting on our campus, we aspire to compel the administration to create a campus-wide composting collection to accommodate the large amounts of organic waste produced throughout CUIMC. We thank the department and our wonderful #CompostingChampions for their support with this effort!

We have also had the pleasure of working with CUIMC's Director of Energy Management and Sustainability for Facilities Engineering, Jeet Viswanathan, to plan a 'trash-tracking' initiative. We aim to physically track trash vestibules with the goal of sustainably updating CUIMC's waste disposal methods in the long-term. This initiative is put on hold due to virtual operations; however, we excitedly look forward to rebooting this initiative when we're back on campus.

Finally, in an effort to expand our SEA network, we have made connections with other sustainable student organizations at Columbia's main campus. Some of these include Columbia Aquanauts, Sustainability Management Student Association (SUMASA), and the School of International and Public Affairs (SIPA) Environmental Coalition. With these new and meaningful connections, SEA looks forward to inspiring more sustainable practices throughout all of Columbia and beyond.

Please stay tuned for our virtual updates and regularly scheduled environmental news-sharing!

Victoria Bortfeld, Saoimanu Sope, Valeria Mazzanti, Haley Campbell

The Executive Board of Students for Environmental Action

Facebook: facebook.com/sea.columbia.publichealth

Instagram: @seacolumbia

Engage: [SEA on Engage](#)

INFORMATION SESSION

As we've all observed, the COVID-19 pandemic has impacted the world as a whole in recent months. In EHS, we've been lucky enough to have a direct line to the important research and modeling during this time. It's a true demonstration of just how important public health and EHS is when combatting such health crises. Dr. Jeff Shaman has been conducting vital research on modeling and predicting the future course of this novel coronavirus as it has impacted so many in the world, including our local community.

Our current students have had the privilege of engaging in direct discussions with Dr. Shaman and several EHS faculty members on a regular basis to discuss specifics of the research, the findings, and the pressing issues related to COVID-19. These opportunities have been through both Department-wide virtual town halls and through student and faculty-specific virtual meetings. During these meetings, many important questions and topics are discussed such as: possible future case number predictions, methods by which the research and modeling are conducted, as well as best practices to prevent spread and symptoms to be aware of.

Such informative gatherings are not new to EHS. As a close-knit community, EHS has stepped up to offer such gatherings in the past, for instance, to address the political climate and questions about the future of the EPA. We plan to continue the discussions about COVID-19, as we feel it's important to stay informed together, as a Department, and to prepare our students, who will take on important roles in the future of Public Health and Environmental Health Sciences.

ALUMNI PANEL

This semester we were able to provide a twist on an Annual event for our current students. Instead of our typical in-person Alumni Panel, we held a virtual Alumni Panel event and Alumni from all over the world were in attendance!

In the past, this event has been held in-person each spring. We typically invite a few former students to discuss their current positions, career paths, and skills they developed at Mailman. This year, as the spring was converted to fully virtual activities, we opened our invitation not only to alumni still based in New York, but Alumni around the globe! For this event, we collected information about the alumni through pre-surveys in order to pair them with current students. During the event, there were 2 sessions of Zoom breakout rooms where current students were matched with alumni they were most interested in hearing from. In each breakout room, our generous 2nd year master's student moderators: Betty Fletcher, Maxine Coady, Lizbeth Gomez, Grant Tore and Haleigh Cavalier facilitated these interactions. Thank you to all students and alumni who participated. We hope you enjoyed this twist on our usual in-person version of the Alumni Panel!

A special thank you to our alumni participants:

- Sasha Berns, MPH
- Gagan Verma, MD
- Sunny Uppal, MPH
- Kate Weinberger, PhD
- Darwin Keung, MPH
- Peggy Hsieh, MPH
- Nada Zaidan, MPH
- Michael Musso, MPH
- Stella Keck, MPH
- Jessica Brown, MPH
- Syd Wolchok, MPH
- Corey Park, MPH
- Tala El-Yousef, MPH
- Erica Chung, MPH
- Rachel Locke, MPH

