

DEPARTMENT OF ENVIRONMENTAL HEALTH



DEPARTMENT NOTES | March 2022

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Global leaders in reso environmenta	earch and training ll and public health	addressing critical n challenges.

While the astronomical start of spring, that is vernal equinox on March 20th, is still weeks away, meteorologist (like me) think of March 1st as the start of spring weather. We hope spring will break out here in New England soon. With better weather and COVID restrictions easing, we are looking forward to in person celebration our 2022 graduating class on May 26th and of our 2020 and 2021 graduates on May 29th. Hope to see lots of our current and recent graduates, their families and friends then.

This Newsletter highlights the accomplishments of our faculty, researchers, students, staff, and alumni. We continue to lead in science, translation, and training to address climate change and other current environmental health challenges. We particularly celebrate the work and leadership of our faculty, researchers, and alumni in addressing the COVID epidemic over the past two years, and in translating our science into guidance on environmental health measures to reduce the spread of this virus. We also acknowledge and thank our alumni and public health colleagues who are confronting the humanitarian crises in Ukraine, Afghanistan, and other parts of the world. The relevance and importance of public health has never been clearer.

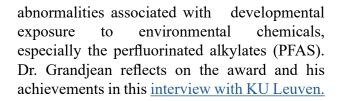
Douglas W Dockery ScD
Acting Department Chair
John L. Loeb and Frances Lehman Loeb
Research Professor of Environmental Epidemiology

Updates, Awards, Honors & Accolades



The Research paper
- Character Strengths
Involving an Orientation
to Promote Good Can
Help Your Health and
Well-Being. Evidence
from Two Longitudinal
Studies – from Harvard
Chan SHINE was

selected as the Best Papers of 2021 by the American Journal of Health Promotion. In the paper lead author Dorota Weziak-Bialowolska, research scientist at Harvard Chan SHINE and research associate at Human Flourishing Program, explored the impact of an orientation to promote good — one aspect of strengths of character, understood as having consistent thoughts and taking actions that contribute to the good of oneself and others — on health and well-being. The research team, including Piotr Bialowolski, research associate at SHINE, Tyler J. VanderWeele, director of Human Flourishing Program and Eileen McNeely, director of SHINE, - showed that orientation to promote good was positively associated with subsequently higher levels of life satisfaction and happiness, self-assessed mental health and physical health, social connectedness and purpose in life. It was also associated with decreased anxiety, depression and loneliness. The results indicated that orientation to promote good should be considered as an important factor for improving population health and human flourishing in general and also while at work.



Dr. David Christiani, Elkan Blout Professor of Environmental Genetics, was voted by Boston Magazine as one of the Best Doctors in Pulmonary Medicine for the 22nd year running.

Buonocore, Research Jonathan Scientist in C-CHANGE, received funding from the Windward Fund to perform a health impact assessment (HIA) of EPA's proposed methane rule, rules for flaring, and a third potential policy, using BenMAPR. BenMAPR is similar to EPA's BenMAP but has the capacity to model the health benefits of reduction of nitrogen dioxide produced by combustion with health impacts fairly close to the source, which is not included in EP's HIAs of air pollution policies. This will provide county-level information on health benefits and monetary value of health benefits from these different policies, nationwide, for more than 10 different health outcomes in adults and children.



On 2 February 2022, <u>KU</u>
<u>Leuven</u> celebrated Patron
Saint's Day by awarding
an honorary doctorate to **Dr. Philippe Grandjean**,
Adjunct Professor of
Environmental Health.
Dr. Grandjean's research

focuses on neurobehavioral development, immune system functions, and metabolic

We learned of a new teaching award, the Sastry Award for Outstanding Teaching in Public Health. The award is to recognize the ways that an instructor has, through excellent teaching, inspired students to reach their public health goals. This is just one of several teaching awards that the school bestows; a list of others can be found here. Keep these awards in mind as the spring semester progresses; it means a lot to recognize outstanding teaching by our faculty and fellows by nominating them.

Popular Press Translating Our Science



The Planetary Health
Alliance (PHA) in
partnership with the
European Environment and
Sustainable Development
Advisory Councils
Network (EEAC Network),
hosted a Planetary Health

European meeting with 22 organizations from 9 countries leading planetary health work across Europe. They heard from voices across a diverse array of sectors including healthcare, universities, religious institutions, humanitarian groups, youth, policy, business, civil society, and more. There were numerous interesting areas of overlap from education courses and degrees; research agendas and gaps; as well as planetary health communication, policy, advocacy, and movement building. The PHA sees Europe as exceptionally fertile ground for developing planetary health leadership globally. Over the next several months, the PHA will host further meetings to connect organizations, develop synergies, and see what a Planetary Health European Hub initiative might look like.

Planetary Health was in the spotlight this month with <u>United Nations Development Programs Special Edition Bulletin</u> as a collaboration between the PHA and the UNDP's Community of Practice on HIV and Health. Several of our Campus Ambassadors as well as Director Sam Myers, principal research scientist, shared quotes, and the bulletin highlights the Sao Paulo Declaration on Planetary Health, health and climate solutions, sustainability, and resilience as well as disaster preparedness.

In collaboration with the <u>NIEHS Center for Environmental Health</u>, **Lisa Frueh**, Research Assistant, **Gary Adamkiewicz**, Associate Professor of Environmental Health and Exposure Disparities, and **Tamarra James-**

Todd, Mark and Catherine Winkler Associate Professor of Environmental Reproductive and Perinatal Epidemiology, launched an exciting interactive story mapping project focusing on Environmental Racism in Greater Boston. The series of interactive web resources is intended to inform a broad audience about environmental racism and environmental justice issues in greater Boston across several domains.



Ernani Choma, Postdoctoral Fellow. and co-authors John S. Evans, Adjunct Professor of Environmental Health. José Gómez-Ibáñez, Derek Bok Professor Urban of Planning **Public** and Policy, Emeritus, Qian Di,

Doctoral Student, Joel Schwartz, Professor of Environmental Epidemiology, Jim Hammitt, Professor of Economics and Decision Sciences and Jack Spengler, Akira Yamaguchi Professor of Environmental Health and Human Habitation, wrote an influential PNAS article entitled Health benefits of decreases in on-road transportation emissions in the United States from 2008 to 2017. It was featured in an Associated Press story Vehicle emission declines decreased deaths and a Popular Science story Better vehicle emissions standards may have saved thousands of Americans. The article quantifies the number of lives and dollars saved by instituting policies that result in significantly decreasing the number of PM2.5-attributable deaths.

Popular Press Translating Our Science



Colleagues from the SHINE Program recently featured in the Emerald Publishing Opinion Blog. Eileen McNeely's, Co-Founder and Executive Director of SHINE, blogs, Business as a platform for humans

flourishing: Now what do we do with that? where she explores how organizations can help employees and business thrive by considering the impact of work on individuals and the entire work community. **Heloisa Jardim**, Research Manager at SHINE, reports on The Harvard Adult Development study in her blog, Let's be More Intentional about Building Flourishing Work Communities as an On-Ramp for Building a Better Society.

Researchers from Harvard T.H. Chan School of Public Health explored the implications of the COVID-19 pandemic for the future of work and worker safety, health, and wellbeing, in a February 1, 2022 Viewpoint article in The Lancet Public Health, Work and worker health in the postpandemic world: a public health perspective. The article was co-authored by Susan Peters, Research Scientist in the Department of Social. and Behavioral Sciences; Dennerlein, Adjunct Professor of Ergonomics and Safety in the Department of Environmental Health, Gregory Wagner, Adjunct Professor Environmental Health, and Sorensen, Director of the Center for Work, Health & Well-being and Research Professor of Social and Behavioral sciences.

A study led by Aaron Bernstein, C-Change Director and Assistant Professor of Pediatrics, The Costs and Benefits of Primary Prevention of Zoonotic Pandemics, shows the annual costs of primary pandemic prevention actions (~\$20 billion) are less than 5% of the lowest estimated value of lives lost from emerging infectious diseases every year, less than 10% of the economic costs, and provide substantial co-benefits. The authors provide three costeffective actions to prevent future pandemics by stopping spillover of diseases from animals into humans: better surveillance of pathogens, better management of wildlife trade and hunting, and reduced deforestation. The publication received coverage in more than 70 news articles including the Guardians article, Failure to prevent pandemics at source is greatest folly, say scientists, The Huffington Post article, Pandemics Are Expensive. Preventing Them Is Cheap and in USA Today's article, Preventing the next COVID-19 would be cheaper, safer than fighting a pandemic.

Kristopher Sarosiek, Associate Professor of Radiation Biology, adopted his labs research in cell death and apoptosis to understand why there are different severities of COVID-19 between children and adults and the elderly. Kris and his team's recent research publication, Age-dependent regulation of SARS-CoV-2 cell entry genes and cell death programs correlates with COVID-19 severity, was the focus of the Harvard Public Health Magazine article Is helping cells self-destruct the key to treating COVID-19? In the Article Kris explains how his team discovered that apoptosis is a critical natural defense mechanism against COVID-19 and shared hope that his teams research can uncover new treatments and preventative strategies across a wider variety of diseases.

Student Spotlight



Kate Hardock, Master of Science student, was recently appointed to the Board of Directors for the non-profit organization, Science Club for Girls. Kate first became involved in Science Club for Girls in 2018 when she ran the

Boston Marathon and raised over \$1,000 for the organization. She then began mentoring at the King Open school in Cambridge and joined the Development Committee.

The Science Club for Girls provides free and fun experiential after-school STEM programs for girls and gender-expansive youth in the Boston areas and focuses on providing programing to girls and young women from groups underrepresented in STEM by income, race and/or first-generation college bound. The group is holding their flagship community event, the Catalyst Awards, which will be held virtually on Tuesday, April 5th starting with a live, casual networking session at 5:30pm before the main event at 6:00pm. To register please use this link.



Ashley Gripper, PhD Candidate and Health Policy Research Scholar, launched a course that she designed as part of the Health Policy Research Scholars Fellowship with the

Robert Wood Johnson Foundation. The course, with Johns Hopkins University as a partner, introduces participants to <u>Black Agricultural Solutions to Food Apartheid</u> is a series that dives deep into the historical, ancestral, and spiritual connections that Black people have to land and agriculture. Throughout this course, participants are encouraged to learn about their ancestral foodways, agrarian practices, and spiritual connections. These sessions share wisdom and highlight the importance of food sovereignty, rebuilding community, and land-based living.

To find out more about this course click here.

To be featured in the next edition of Environmental Health: Department News please submit your information by completing the survey below:

Click for Department News Survey

Alumni News



Kathleen Attfield (ScD 2009) is Chief of Exposure Surveillance and Epidemiology at the California Department of Public Health in the Biomonitoring California Program. With many studies

for biomonitoring California residents initiated, they seek collaborators with interest in exposure patterns for PFAS, metals, phenols, and several other analyte panels to expand the impact of data already collected. More information available at www.biomonitoring.ca.gov/ and by correspondence (kathleen.attfield@cdph.ca.gov/).



Royce Clifford (SM 2006) is a Research Scientist at the University of San Diego, California and a Visiting Scientist in the Department of Environmental health. Royce was recently awarded a 4-year extension

of the VA Million Veteran Program Research Grant to explore interaction of genomics and environmental exposures in hearing difficulties. Royce's recent publication Hearing loss and tinnitus: association studies for complex-hearing disorders in mouse and man provide a first look at genetic loci involved in aging and noiseinduced sensorineural hearing loss and tinnitus.

Since October 2021, **Roy Deitchman** (*SM 1975*) has been working as a part-time contractor at the National Institutes of Health (NIH) in Bethesda, Maryland. His primary duties include evaluation of workspaces for re-occupancy after COVID-19 closures in 2020 at NIH.

Though many NIH employees worked on

campus through the pandemic, full return to the campus is now in the works. Industrial hygiene aspects for this project include density determinations, HVAC system performance and recent enhancements and employee education.



Barbara Gales (MOH 1992) is as a seasoned physiatrist, internal medicine, and occupational medicine specialist working at the Mann Grandstaff VA Medical Center in Spokane Washington. Prior to this position, Barbara treated

traumatic brain injury patients at Vermont VA Medical center. She is the Medical Director for the Disability Department with the primary focus of evaluating veterans with various disabilities that resulted from a multitude of injuries or diseases they endured during their mission combat deployments, with the ultimate hopes of not only helping patients receive their service-connected benefits but also to serve as the gateway of guidance to further primary care services on their way of recuperating from an injury or disease to a higher quality of life. In acknowledgement of 15 years of service with the VA medical center she received the Department of Veterans Affairs Service Award. Barbara has been a committed mentor to medical students for the last 47 years and is the Co-founder of the Black Bio-medical and Technical Association and was a recent recipient of the Hidden Figures and the Top Doctors Awards.

Alumni News



Michael Grant (SM 2013, ScD 2016) is an Industrial Hygienist at the National Institute for Occupational Safety and Health based in Cincinnati, Ohio. Michael was recently awarded the John J. Bloomfield Award by

the American Conference of Governmental Industrial Hygienists. The award is presented to young industrial hygienists pursuing problems of occupational health hazards primarily by doing fieldwork. He has conducted a wide variety of complex and impactful scientific evaluations for the Health Hazard Evaluation program. His evaluations covered emerging industries like cannabis cultivation and processing along with well-established industries coping with new regulatory challenges like exposures to respirable crystalline silica in the construction industry. He is involved in research efforts to better understand exposures to peracetic acid in the healthcare, biopharma, and protein processing industries. Michael has additionally volunteered for emergency response roles for the Centers for Disease Control and Prevention (CDC), most recently serving in a variety of leadership and support roles for the CDC/ NIOSH COVID-19 pandemic response, having a nation-wide impact.

Jane Hoppin (SM 1991, ScD 1995) is a Professor of Biological Sciences at North Carolina State University, where she has developed a comprehensive and active research program that has as its core mission the improvement of public health. Jane was recently awarded the Governor James E. Holshouser, Jr. Award for Excellence in Public Service for her commitment to service and community engagement. Created in 2007 and renamed in 2013 to honor former Gov.

James E. Holshouser, Jr., the award is designed to "encourage, identify, recognize and reward public service by employees of the University."

Samantha Tracy (SM 2021) received a Fulbright Research Grant to work in partnership with the Okavango Research Institute in Maun, Botswana. Maun is the tourism capital of Botswana and the "gateway to the Okavango Delta". The Delta is a nationally protected UNESCO world heritage site, home to hundreds of wildlife species including elephants, hippos, crocodiles, cheetahs, and rhinos. The Delta is also a source of subsistence for local communities who rely on the fresh water supply and plentiful fish species for consumption. Samantha's research focuses on identifying and quantifying emerging contaminants both in environmental media and within fish tissues. Identified concentrations will then be used to build a risk assessment model to assess potential hazards to wildlife and nearby human populations.

Lieutenant Commander **Clifton Wilcox**, U.S. Navy (*MPH 2017, OEMR 2018*) was deployed for 4 months in support of Operation Allies Welcome (evacuating Afghan refugees) this fall/winter as the public health/preventive medicine lead at Camp Atterbury where he managed several large infectious disease outbreaks using his MPH skillset.

Shojiro Yasui (SM 2002) currently works for the Ministry of Health, Labour and Welfare - Japan. Shojiro conducts research in Occupational Safety and Health, Risk Communication and Risk Management He recently published a book entitled Radiation Protection for Fukushima 50: Lessons Learned From Fukushima Nuclear Disaster, which is a comprehensive summary of worker safety in response to Fukushima

Upcoming Events

Friday, March 11 (1:10 – 1:50 PM ET) Cleaning Materials and Occupational Contact Dermatitis

Drs. Joseph and Goldminz will explain the differences between allergic and irritant contact dermatitis and describe some allergens and irritants that cause occupational contact dermatitis as a result of exposure to cleaning materials. They will discuss several illustrative occupational contact dermatitis cases.

Speakers: Shane Joseph, MD, MPH, resident, Occupational and Environmental Medicine Residency; Ari M Goldminz, MD, Director, Contact Dermatitis and Occupational Dermatology Program, Department of Dermatology, Brigham and Women's Hospital

Location: Kresge 502 and ZOOM: link: https://harvard.az1.qualtrics.com/jfe/form/SV_0drh-cZi1G3r5YW2

Thursday April 7th (1:00 - 2:00 PM ET)

The Departments of Environmental Health, Global Health and Population, Immunology and Infectious Diseases, and Nutrition, along with Harvard University Center for the Environment. the Harvard Global Health Institute, Planetary Health Alliance, the European Environment and Sustainable Development Advisory Councils Network (EEAC) and the World Federation of Public Health Associations warmly welcome Paul Polman and Rudiger Krech as the seventh speakers of the Planetary Health Colloquium Series for their seminar titleded: How Can the Private Sector Help Stimulate a Great Transition please register toward Planetary Health at:https://harvard.zoom.us/meeting/register/ tJwufuurrz4jE9Y4mZ7kryxeo5WbVxuD t2P

April 11th-15th

Eileen McNeely will be a Keynote Speaker at the Art & Science of Health Promotion conference and will introduce her research on <u>Pivoting from</u> Mitigating Risk to Optimizing Flourishing: Why

Business Must Think Differently About Health, Equity, Resilience and the Future of Work

Thursday April 14th (12:00-1:00 PM ET) Indigenous communities have a long history of living with and learning from the environment, but the extraction and transportation of fossil fuels near their communities, along with unjust policies, have put their health, the climate, and in some cases, tribal sovereignty at risk. Join Harvard Chan's Center for Climate, Health and the Global Environment (Harvard Chan C-CHANGE) and the FXB Center on Health and Human Rights at Harvard University on April 14th from 12-1:00 PM ET for a discussion on Indigenous Rights, Environmental Justice, and Climate Change. Hear from Indigenous leaders such as Lisa DeVille, who has witnessed firsthand the effects of oil extraction on the Fort Berthold Reservation in North Dakota; Kandi White, who has been a leading advocate against fracking and pipeline projects; and Harvard faculty on how we can uplift Indigenous voices and curb the impacts of climate change on

July 24-30

frontline communities.

Youth Summits on Climate Equity and Health

The Center for Climate, Health, and the (Harvard Chan C-CHANGE has joined forces with Putney Pre-College, an initiative of Putney Student Travel, to host another year of youth summer programming on climate, equity, and health in July 2022.

The Harvard Chan C-CHANGE Youth Summit trains high school students to be leaders in their communities through workshops, field-based activities, and meetings with scientists, health and policy experts, academics, energy innovators, and more. hsph.me/youthsummit 4p0

Upcoming Events

EH Celebration of the Stars 2021

Join us on Wednesday, March 23; 2:00 PM, as we recognise and celebrate service milestones with members of our community at the HSPH 23rd Annual Celebration with the Stars.

5 years 10 years 15 years 20 years Marcy Franck Francine Laden Cameron Fraser Amra Dewsnap Annie Rodriguez Zachary Nagel Marc Weisskopf Ramon Sanchez Pina Kristopher Sarosiek Zhiping Yang Carolina Zilli Vieira Glenn Stern

35 years45 years55 yearsDavid ChristianiDouglas DockeryJoseph Brain

Current Oppurtunities in Environmental Health

<u>Postdoctoral Fellowship</u> – Environmental Risk Factors & Women's Cancer – National Institute of Environmental Health Sciences

<u>Postdoctoral Fellowship of Climate Health</u> – The Institute for Circumpolar Health Studies at the University of Alaska Anchorage

Biosafety Officer - Environmental Health & Engineering, Inc.

<u>Safety Officer</u> – Environmental Health & Engineering, Inc.

EHS Healthcare Compliance – Environmental Health & Engineering, Inc.

The Laboratory Safety Advisor - Harvard Environmental Health and Safety

Please submit all events to envhlth@hsph.harvard.edu