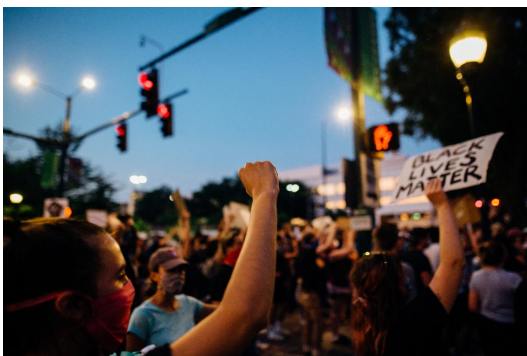
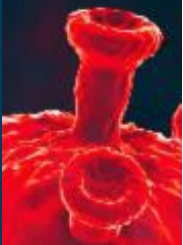
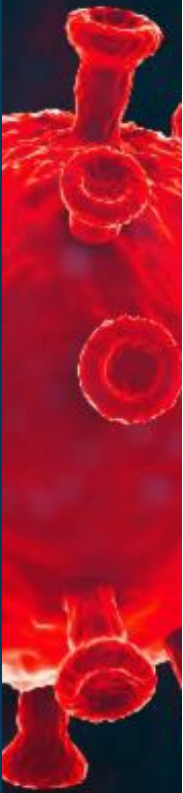


## Environmental justice is an antidote to COVID-19 and racism



As the world and civil society undergo dramatic changes, we find ‘normal’ being redefined almost on a weekly basis. Yet, environmental health sciences remain not only relevant, but a critical lens for making sense of these times.

Take SARS-CoV2, also known as COVID-19. Similar to many other infectious agents that from time to time forcefully emerge and make us sick, this pandemic has its origins in the environmental changes that have been accelerating over the last 10, 50 and 500 years. As human development has encroached further and further into wildland, converting those spaces into land for agriculture, livestock, buildings, industry, and roads, species that we rarely ever met are now coming into contact with us, either directly or through our food and water sources. Although the animal that transmitted the virus to us has not been confirmed (with bats one of the primary suspects), such spillover of viruses (and other microbes) is inevitable. Thus, anthropogenic land use is itself the culprit, which



coincidentally is also contributing to climate change: For example, the burning of the Amazon and other forests that otherwise efficiently sequester carbon, reducing CO<sub>2</sub> on a very large scale.

Our EHSC is now tackling another aspect of the COVID-19 pandemic, specifically, how workers are affected and how workplaces are, or are not, being made safer to reduce transmission and protect those on the frontlines (see article below). The [COVID-19 Survey for Workers](#) will collect information on what protective measures their employers are implementing, and will compare across industries, region, job types, race and ethnicity.

The higher COVID-related death rates among people of color reflects, in part, the types of jobs predominantly done by black and brown people, including food production, long term care facilities, transportation and other services, a manifestation of structural racism. At EHSC, we recognize that environmental health is intertwined with human rights, and that environmental justice is a prerequisite to eliminating disparities in health!

## **Irva Hertz-Picciotto, PhD**

Director, UC Davis Environmental Health Sciences Center

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### **COVID-19 Survey for Workers**



EHSC is launching a COVID-19 research project on workers. [Irva Hertz-Picciotto](#) is leading this effort with an online survey that includes union and non-union, employed and unemployed, documented and undocumented, frontline and remote workers. The aim is to get tens of thousands of people across the United States to participate in this project.

The [COVID-19 Survey for Workers](#) asks about the impact of COVID-19 on employment status, access to personal protective equipment, changes made in the workplace to protect workers, COVID-19 infections and financial stressors. We hope the results will help us better understand challenges workers face on and off the job, and assess differences in exposures and protections by industry, geography, job type and race or ethnicity.

This research also is helping EHSC develop new community partnerships. EHSC has met with the AFL-CIO, the Kaiser Permanente Union Coalition, UNITE-HERE, the National Union of Healthcare Workers, California Nurse

Midwives Association and Sonoma's Graton Day Labor Center to learn more about what workers are experiencing during the pandemic and get valuable input on survey questions. Additionally, our outreach has connected us directly to hundreds of thousands of workers in online groups. Look for an update on this research in August's newsletter!

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## CONGRATULATIONS TO OUR PILOT PROJECT GRANTEEES!

Congratulations to the recipients of EHSC's [2020 Pilot Projects](#): Peter Havel, Laura Van Winkle, Lisa Miller, Tina Palmieri, Nam Tran, Crystal Rogers and Anthony Wexler. Their proposals are a dynamic combination of projects helping us better understand the impacts of air and water exposures from roadways and wildfires. Here's a brief summary of their projects:

- Drs. Havel and Van Winkle are using animal models to examine the association of roadway air exposure and the onset of diabetes.
- Dr. Miller is measuring endoplasmic reticulum stress markers in primates and humans exposed to wildfire smoke, and exploring how toxins from wood combustion mediate cellular injury.
- Drs. Palmieri and Tran are focusing on clinical outcomes of wildfire burns through a biospecimen repository and developing a patient toxin testing panel.
- Dr. Rogers is exploring the effects of nitrates — a problem in the Central Valley's water supply — on the development of craniofacial defects in embryos.
- Dr. Wexler is building a new furnace facility to understand more clearly the impacts of burning and smoldering plastics, pesticides, building materials and other products or items.

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## “Waking Up to Wildfires” gets Emmy nomination

We're excited to announce EHSC's documentary [“Waking Up to Wildfires”](#) received an [Emmy nomination](#) in the health, science and environment category! PBS is syndicating the video nationally and so far



almost one-third of public television stations have aired it. From Altoona and Cincinnati to San Francisco and Seattle, tens of thousands of people are watching the film and many more will get to see it before the documentary's run ends in 2021.

While the nomination is an honor in itself, we'd love for you to join us at the Virtual

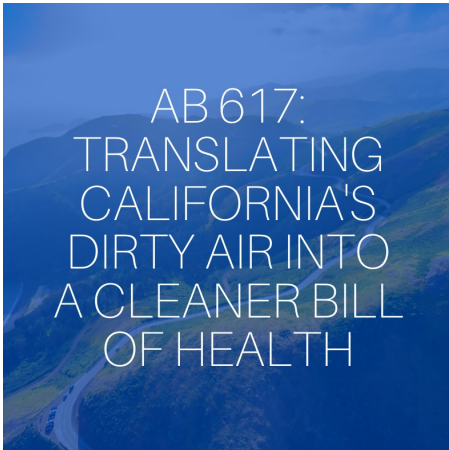
Emmy Awards to see if we win. Emmy winners

will be announced through a livestreamed webcast on **Saturday, June 6** starting at **7:00 PM**. The webcast will air on the Northern California Emmy website ([emmysf.tv](http://emmysf.tv)), and viewers can join in on social media with **#EmmySF2020**.

If you haven't seen the documentary yet, you can now watch the 30-minute PBS version on [YouTube](#).

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## **AB 617: Translating California's dirty air into a cleaner bill of health**



To help shore up California's struggle for clean air, environmental justice advocates are championing [Assembly Bill 617 \(AB 617\)](#) to bring the fight more directly into the communities that shoulder a heavier burden when it comes to air pollution.

Many members of [EHSC's Community Stakeholder Advisory Committee](#) have been an integral part of the creation and

implementation of AB 617 by ensuring inclusion of pesticides in the legislation, deployments of community air sensors, community education around air quality and that those most in need of local air monitoring funds get it.

EHSC researchers have been directly involved too, including Community Engagement Core Co-Director [Jonathan London](#) who's working with CARB to [evaluate community-engagement efforts](#) and locals to explore setting up Technical Advisory Groups with scientists who can provide independent assessments of monitoring plans and data.

[Read more about EHSC's work around AB 617.](#)

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## Research spotlight



In an exciting example of one of EHSC's long-term investments paying off with a new discovery, EHSC researchers Jill Silverman, Keith Bein, Anthony Wexler and Pamela Lein co-authored a paper titled [\*Effects of early life exposure to traffic-related air pollution on brain development in juvenile Sprague-Dawley rats\*](#). Published in the journal *Translational Psychiatry* on May 27, the research represents the first-ever preclinical

data to demonstrate a phenotype relevant to human neurodevelopmental disorders associated with exposure to real world traffic-related air pollution. Scientists used an ambient level of PM from a traffic tunnel in Northern California to expose rats to polluted air. Keith Bein built the experimental traffic tunnel chamber with funds from his [\*2015 pilot project\*](#).

The new research represents an enormous collaboration across organizations at UC Davis and Washington University in Saint Louis, Missouri. The institutions and centers involved include the Intellectual and Developmental Disabilities Research Center here and at Washington University, and the UC Davis School of Veterinary Medicine, School of Medicine, Air Quality Research Center and College of Engineering.

The paper's first author Kelley Patten is a PhD student in Pharmacology and Toxicology at UC Davis and received her funding from the LaMP and NIEHS T32s.

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## Recently published

- Patton KT, González EA, Valenzuela A, Berg E, Wallis C, Garbow JR, **Silverman JL, Bein KJ, Wexler AS** and **Lein PJ**. [\*Effects of early life exposure to traffic-related air pollution on brain development in juvenile Sprague-Dawley rats\*](#). *Translational Psychiatry*. 2020 May 27;10(166).
- **Cannon CEB**. [\*Towards Convergence: How to Do Transdisciplinary Environmental Health Disparities Research\*](#). *International Journal of Environmental Research and Public Health*. 2020 Mar 29;17(7). pii: E2303. doi: 10.3390/ijerph17072303.
- Klocke C, Sethi S, **Lein PJ**. [\*The developmental neurotoxicity of legacy vs. contemporary polychlorinated biphenyls \(PCBs\): similarities and differences\*](#). *Environmental Science and Pollution Research*

International. 2020 Mar;27(9):8885-8896. doi: 10.1007/s11356-019-06723-5. Epub 2019 Nov 12.

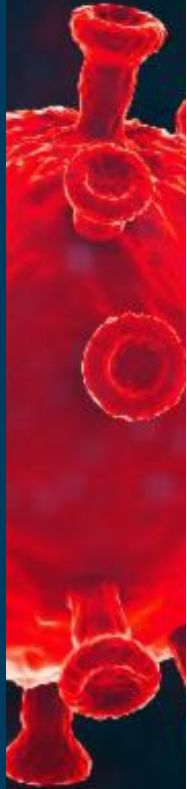
- **Kent Pinkerton** editorialized about [SARS-CoV-2 infection in children](#) in the April 23, 2020 edition of the New England Journal of Medicine.
  - **Anthony Wexler** co-authored the editorial [The coronavirus pandemic and aerosols: Does COVID-19 transmit via expiratory particles?](#) in the April 3, 2020 edition of Aerosol Science and Technology.
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## In the news

- Nature interviewed **Nicholas Kenyon** in [How should vulnerable people be protected during wildfires?](#)
  - The Sac Bee interviewed **Irva Hertz-Picciotto** in [A 'fire of infections' could sweep California evacuation centers. Here's the plan to stop it](#)
  - KCRA 3 interviewed **Anthony Wexler** for their story [Californians breathing cleaner air during stay-at-home order](#)
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## A good read

- [No research on us without us: Prioritizing inclusion in environmental health](#) by Brianna VanNoy in the May 13, 2020 edition of Environmental Health News
  - [I'm a black climate expert. Racism derails our efforts to save the planet.](#) by Ayana Elizabeth Johnson in the June 3, 2020 edition of the Washington Post
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**Jonathan Fisher** ✓  
@fishplums



think the idea is that people will use it to buy food actually



## Money for nothing will not buy us happiness

The idea of a universal basic income is gaining traction in the current crisis but we should be wary of its easy appeal

Clare Foges | Monday April 13 2020, 12.01am, The Times

♡ 118K 3:03 AM - Apr 13, 2020



💬 17.6K people are talking about this



If you have any announcements, new research, press coverage or anything else you'd like to share with your EHSC colleagues in this newsletter, please contact Jennifer Biddle ([jsbiddle@ucdavis.edu](mailto:jsbiddle@ucdavis.edu)). Thank you!

Connect with us / [environmentalhealth.ucdavis.edu](http://environmentalhealth.ucdavis.edu)

