



# Welcome back

## COVID-19, Wildfires, Racial Disparities and Environmental Health

As we begin the new academic year, we carry the weight of more than six months of startling mega-changes and realizations about the fragility of our ways of life of the last quarter or half century. When I entered UC Berkeley's School of Public Health to become an epidemiologist in the 1980s, the accepted perspective in public health appeared to place infectious diseases low on the list of health threats to really worry about. We read about the old terrifying epidemics—cholera, yellow fever—and heard some old timers discuss the mostly tropical viruses that still popped up here and there, but it always seemed distant. Chronic conditions—cancer, cardiovascular disease, stroke, diabetes, Alzheimer's and many others—were front and center not only here in a western,

industrialized nation but also increasingly in countries that were going through major economic transitions. Then, a few decades and along came the coronavirus. A short-lived paradigm toppled within a few months.

We are a Center devoted to investigating the environmental factors that shape our health and developing interventions that can reduce harmful exposures, mitigate their impacts and build resilience. Last month we held a webinar on the theme of [air pollution, race and COVID](#). We already had begun to learn how to pivot to respond to unexpected new health threats, beginning with the October 2017 wildfires. Over the last few months, we launched several surveys to collect information about the impact COVID-19 has had on families, the workplace, and people's stress levels and sense of well-being. EHSC also teamed up with the [California Domestic Workers Coalition](#) and is collecting data on this mostly Latina worker population that has virtually none of the rights that most U.S. workers have. While [Senate Bill 1257](#) aimed to change that, the governor did not sign it. The survey data, however, will help draw attention to the continued injustices that workers in these jobs face every day, both pre-COVID and during the pandemic.

As this season's wildfires have been the largest blazes yet, we convened the campus-wide Wildfire Work Group and are currently collecting household and biologic samples and are identifying labs to analyze these samples in order to find clues about the composition of wildfire smoke and its biologic effects in different tissues not only from people but also from their pets. Just this week, we were excited to learn that our application to NIH for the [Rapid Acceleration of Diagnostics-Underserved Populations](#) (RADx-UP) to test community-based strategies to increase the uptake of testing among Latinx communities in the San Joaquin Valley has been funded! Most Central Valley counties in California are experiencing high incidence of SARS-CoV-2 and high case fatality and population mortality rates. Farmworkers, construction workers and other essential workers have had some of the most extreme spikes in incidence. In California, SARS-COV-2 highlights and exacerbates racial and ethnic disparities. This week, Fresno County has 1 COVID-19 positive person for every 34 people in the county; Madera County has 1 in 33; Merced County, 1 in 32; Stanislaus County, 1 in 32, San Joaquin County, 1 in 35, and Yolo County, 1 in 74. [Learn more about the consortium](#), which includes 23 such COVID-19 testing intervention centers around the country and additional sites to focus exclusively on community engagement.

The pandemic has slowed down or brought to a halt numerous human health research studies that involve in-person visits because of shelter-in-place and the critical need for physical distancing. Examples include longitudinal studies of children with autism: MARBLES (PI: Schmidt) or ReCHARGE (MPI: Hertz-Picciotto, Schmidt, Bennett, Walker) However, toxicologic research in cell cultures or whole animals is continuing. The uncertainty continues, as our climate throws extreme events in all directions. Environmental health science is more timely than ever: when the times are uncertain, science, prediction modeling and molecular biology are unpacking the uncertainty and providing the hard data that will help us navigate the tumultuous seas ahead.

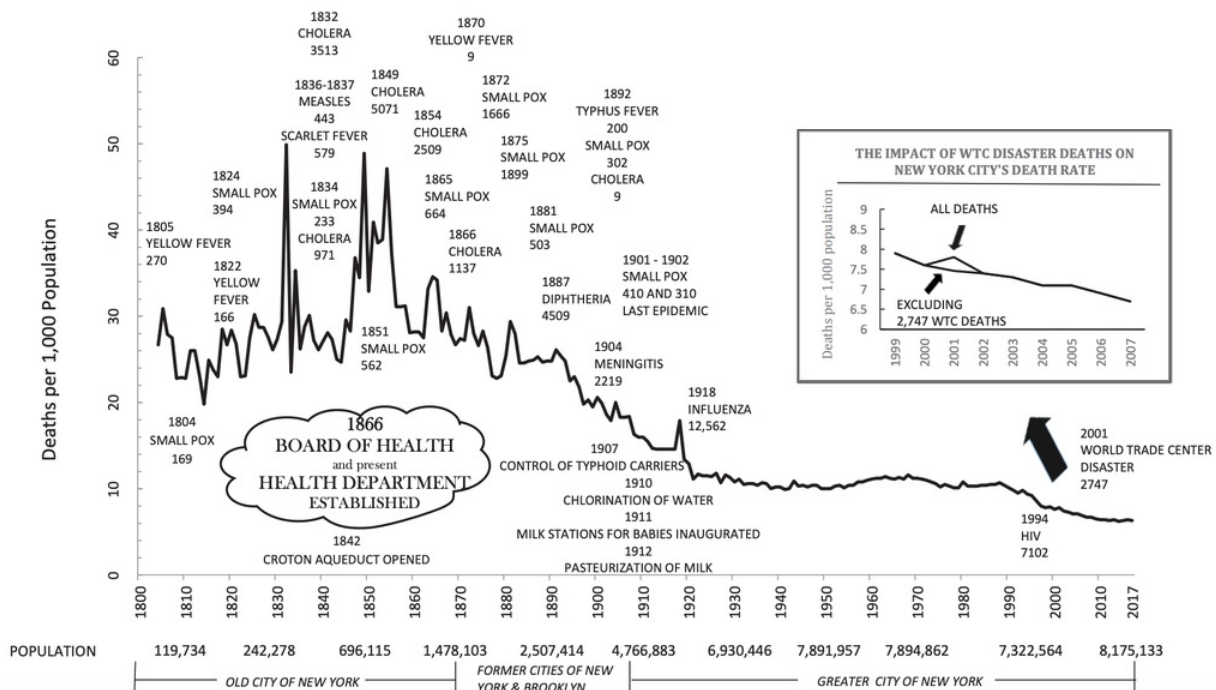
It's the right time to pause, so please join us at EHSC's 2020 Annual Retreat! See details below.

**Irva Hertz-Picciotto, PhD**



# The Conquest of Pestilence in New York City

...As Shown by the Death Rate as Recorded in the Official Records of the Department of Health and Mental Hygiene.



## 2020 EHSC Annual Retreat

UC DAVIS ENVIRONMENTAL HEALTH SCIENCES CENTER  
**2020 ANNUAL RETREAT**  
OCTOBER 12 & 13

THIS EVENT WILL TAKE PLACE ON ZOOM  
DON'T MISS KEYNOTE SPEAKER  
**TYRONE HAYES, PHD**  
ON "FROM SILENT SPRING TO SILENT NIGHT:  
A TALE OF TOADS AND MEN"

Also featuring presentations on COVID-19 & climate change by Iva Hertz-Picciotto, Mike Kleanman and Christine Kreuder Johnson. Plus talks on new research by EHS Scholars, poster sessions and an Environmental Justice research exchange.

Register here <https://tinyurl.com/ESHRetreat2020>  
and visit [environmentalhealth.ucdavis.edu](http://environmentalhealth.ucdavis.edu) for more details.

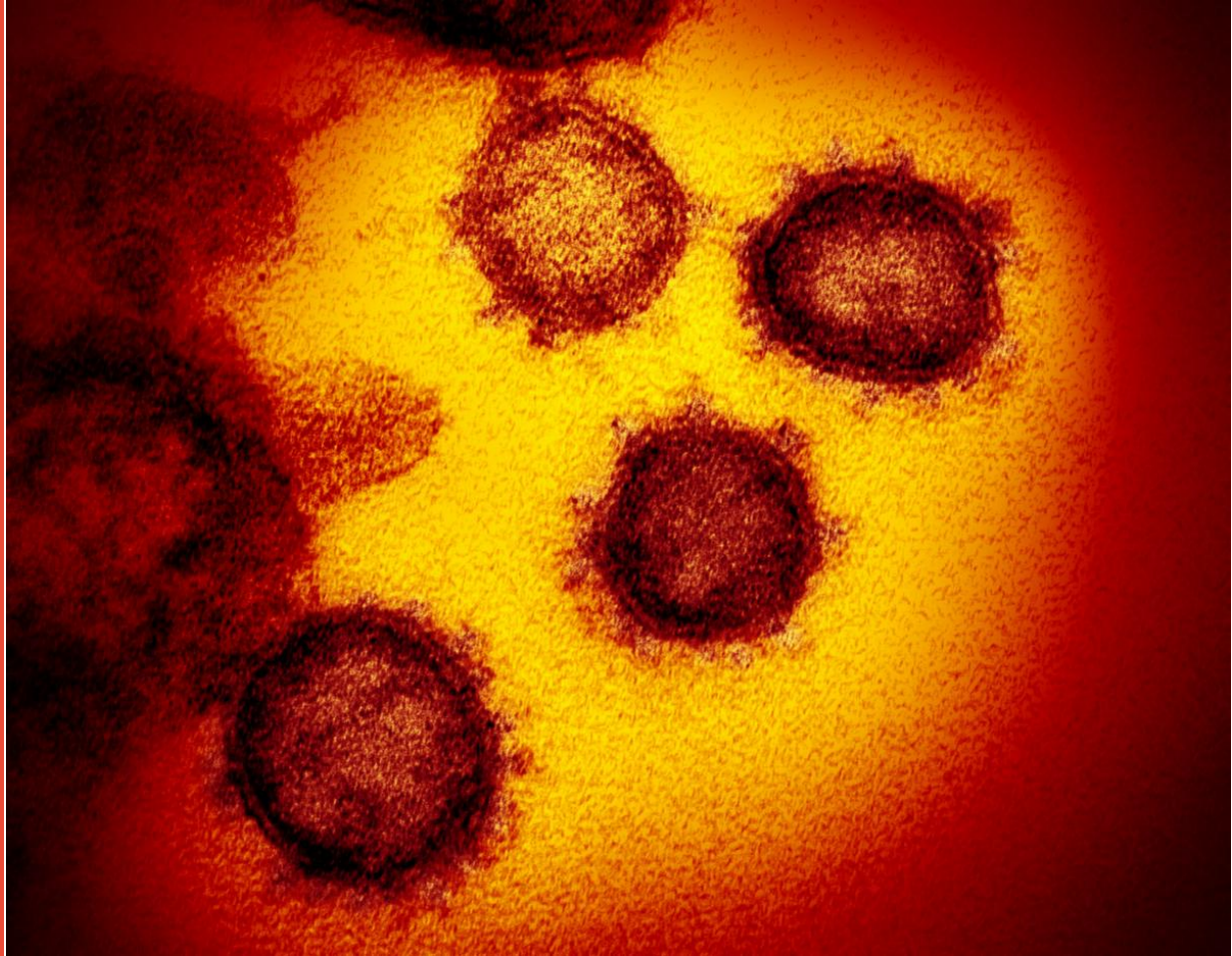
UC DAVIS  
ENVIRONMENTAL HEALTH  
SCIENCES CENTER

The [2020 EHSC Annual Retreat](#) is just around the corner! Our retreat planning committee has been busy preparing for an engaging, virtual program across two days on October 12 and 13. We're excited to kick off Day 1 with keynote speaker [Tyrone Hayes](#), an African American environmental endocrinologist whose studies of frogs and endocrine disrupting chemicals (and his race!) made him the target of intense harassment.

We'll also hear presentations on climate change, COVID-19 and health disparities, and have lightning-style talks from selected poster presenters. Day 2 will start with a discussion on research in environmental justice with scientists and community partners, followed by poster presentations and talks given by EHSC Scholars on their emerging research.

We hope to see you all there. Be sure to [register for the retreat](#) and attend any or all sessions as your schedule allows. Check out [more information on our website](#) and feel free to forward to colleagues, students and others who may have interest in attending. If you have questions about the retreat, contact Program Manager Natalie Nardone ([nlnardone@ucdavis.edu](mailto:nlnardone@ucdavis.edu)).





## COVID-19 research

Since mid-June, EHSC's [COVID-19 Survey for Workers](#) has been recruiting participants through Facebook groups ([including our own](#)). At the end of September, we had collected data from hundreds of participants working in a wide range of industries across the country. Soon, we'll be running Facebook ads and organizing a week of action online with some of our partner organizations to help promote recruitment via social media.

We've also met with half a dozen workers' centers and unions to develop partnerships and disseminate the survey directly to their members, including with [Service Employees International Union, Local 2015](#), which represents long-term care workers in Northern California. Through collaborations with Sonoma's [Graton Day Labor Center](#) and the [California Domestic Workers Coalition](#), we've developed a survey specific to groups that typically work multiple jobs daily. We recently shared preliminary data with the California Domestic Workers Coalition for their campaign on [SB1257](#), and now are preparing to conduct phone interviews in Spanish with Graton Day Labor Center clients.

If you'd like to learn more about our COVID-19 research, please contact EHSC Program Manager Natalie Nardone ([nnardone@ucdavis.edu](mailto:nnardone@ucdavis.edu)).

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## COVID-19: Profiles from the frontlines of the pandemic



We've started publishing a web series on frontline workers featuring everyday people from across a range of industries who face unique challenges on the job. Our first in this series is with Alison Young, a nurse-midwife at Planned Parenthood in Chico, California.

Alison is also the secretary of the [California Nurse-Midwives Association](#), one of the community groups we partnered with on the [COVID-19 Survey for Workers](#). [Read Alison's story here.](#)

If there's someone you know who may want to participate in this project, please contact Jennifer Biddle ([jsbiddle@ucdavis.edu](mailto:jsbiddle@ucdavis.edu)).

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## Updates from our cores



### Community Engagement Core

In September, EHSC's Community Engagement Core (CEC) hosted its first ever webinar "From Research to Environmental Justice." The idea behind the event was to attract new researchers who might be interested in community-engaged research and [apply for Pilot Project funding this year.](#)

Some 50 people attended, including many UC Davis researchers. Several of our community partners gave overviews of their work in the Central Valley, including Jane Sellen from Californians for Pesticide Reform, Shankar Prasad from the Office of Environmental Health Hazard Assessment and Nayamin Martinez from the Central California Environmental Justice Network.

You can watch the webinar on [YouTube](#) or our [website](#). Please share it with your colleagues. For more information on this year's pilot projects or upcoming CEC work, please contact CEC Program Manager Aubrey Thompson ([abthompson@ucdavis.edu](mailto:abthompson@ucdavis.edu)).

### Integrative Health Sciences Facility Core (IHSFC)

The IHSFC recently funded a Seed Award to [Rebecca Schmidt](#) for her project "Nasal and Fecal Biospecimen Collection for a Pregnancy Wildfire Cohort." The goal of this project is to collect nasal, oral and fecal swabs from the [B-SAFE wildfire pregnancy cohort](#), for later measurements of epigenetic DNA methylation changes, gene expression changes and nasal, oral and fecal microbiome.

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## Recently published

- Yaghoobi B, Taiwo TK, Lein PJ (2020) [Going viral: COVID-19, environmental](#)



- [justice, and institutionalized racism](#), *Open Access Government*, Profile, October 2, 2020,
- Andrew P, **Lein PJ** (2020) [Climate toxicology: The Toxicological Impacts of Climate Change](#), *Open Access Government*, eBooks, October 2, 2020.
  - Tal T, Yaghoobi B, **Lein PJ**. [Translational Toxicology in Zebrafish](#). *Curr Opin Toxicol*. 2020 Oct-Dec;23-24:56-66. doi: 10.1016/j.cotox.2020.05.004. Epub 2020 Jun 8. PMID: 32656393; PMCID: PMC7351119.
  - Panesar HK, Kennedy CL, Keil Stietz KP, **Lein PJ**. [Polychlorinated Biphenyls \(PCBs\): Risk Factors for Autism Spectrum Disorder?](#) *Toxics*. 2020 Sep 17;8(3):E70. doi: 10.3390/toxics8030070. PMID: 32957475.
  - Yeap D, McCartney MM, Rajapakse MY, Fung AG, **Kenyon NJ, Davis CE**. [Peak detection and random forests classification software for gas chromatography/differential mobility spectrometry \(GC/DMS\) data](#). *Chemometr Intell Lab Syst*. 2020 Aug 15;203:104085. doi: 10.1016/j.chemolab.2020.104085. Epub 2020 Jun 15. PMID: 32801407; PMCID: PMC7428162.
  - **La Merrill MA**, Krigbaum NY, Cirillo PM, Cohn BA. [Association between maternal exposure to the pesticide dichlorodiphenyltrichloroethane \(DDT\) and risk of obesity in middle age](#). *Int J Obes (Lond)*. 2020 Aug;44(8):1723-1732. doi: 10.1038/s41366-020-0586-7. Epub 2020 May 15. PMID: 32415255; PMCID: PMC7387196.
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## In the news

- The Verge interviewed **Anthony Wexler** on new mapping technology for [Cheaper air quality sensors arrived just in time for the climate catastrophe](#).
  - National Geographic interviewed **Irva Hertz-Picciotto** and **Keith Bein** for [How breathing in wildfire smoke affects the body](#).
  - HuffPost interviewed **Lisa Miller** for [What We Don't Know About Wildfire Smoke Should Scare Us](#)
  - The San Francisco Chronicle interviewed **Rebecca Schmidt** for [California fire smoke: What are the health risks for pregnant women?](#)
  - The Los Angeles Times interviewed **Rebecca Schmidt** for [How bad is all that wildfire smoke to our long-term health? 'Frankly, we don't really know'](#)
  - The Sac Bee interviewed **Irva Hertz-Picciotto, Nicholas Kenyon** and **Anthony Wexler** for [Does my COVID mask protect me from wildfire smoke? Experts answer key questions](#).
  - Mic interviewed **Irva Hertz-Picciotto** for [Why this year's wildfire season is particularly catastrophic](#)
  - Cap Radio interviewed **Irva Hertz-Picciotto** for [As California Wildfire Seasons Worsen, What's The Impact On Children's Health Long-Term?](#)
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## Announcements

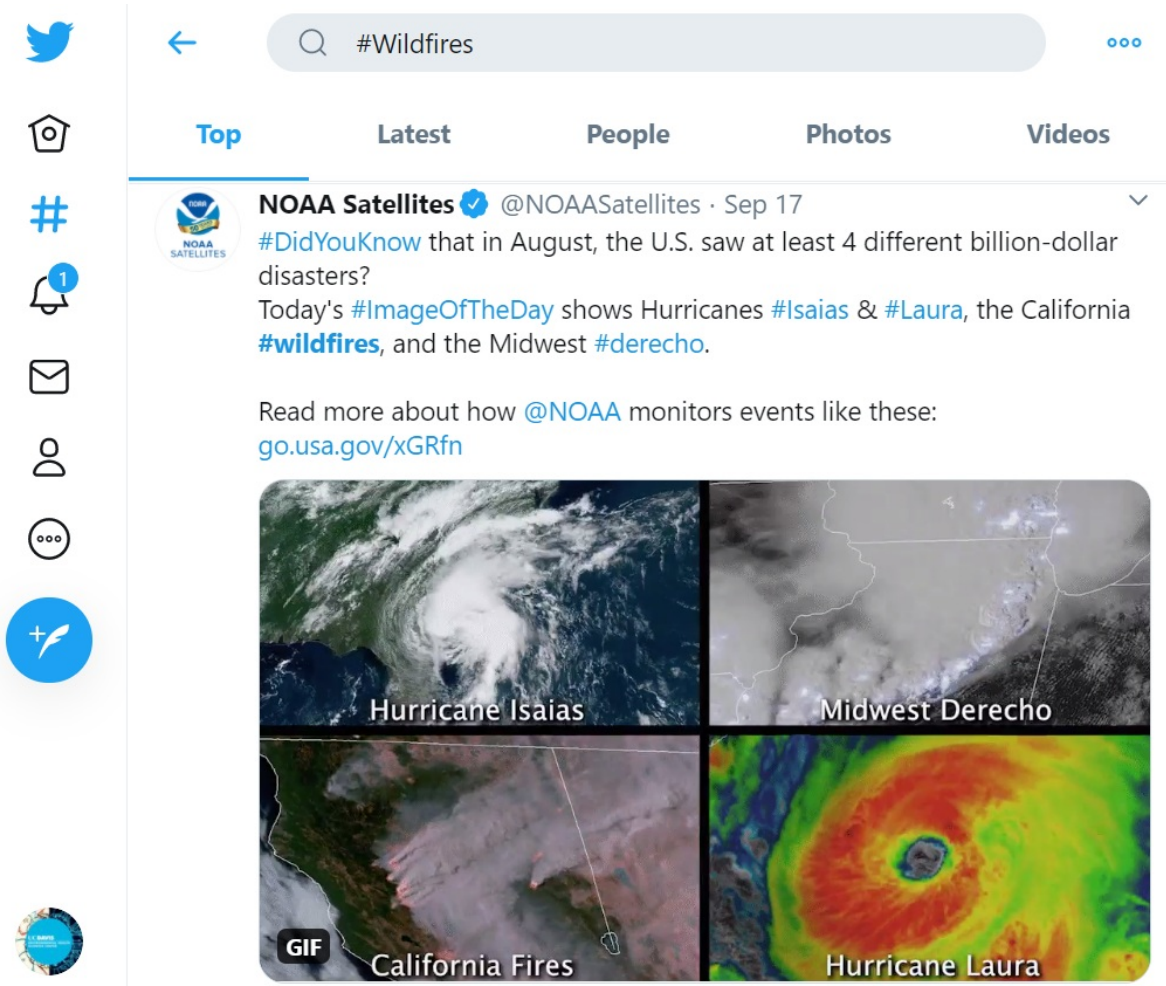
- **Call for Concept Letters** for the [2020-2021 Pilot Projects Program](#) is now open. The deadline to submit is Monday, November 2. Submissions are being accepted in [InfoReady](#).
  - **Research priorities meeting for Pilot Project applicants:** On Monday, October 19 from 11:00 AM-2:00 PM, the Community Engagement Core will host an informational meeting with our community partners for prospective pilot project grantees. Read the [2020-2021 research priority list](#) and [register here](#). For more details, contact Community Engagement Core Program Manager Aubrey Thompson ([abthompson@ucdavis.edu](mailto:abthompson@ucdavis.edu))
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## A good read

- Gatewood, J., Monks, S. L., Singletary, C. R., Vidrascu, E., & Moore, J. B. (2020).

[Social Media in Public Health: Strategies to Distill, Package, and Disseminate Public Health Research](#). J Public Health Manag Pract, 26(5), 489-492.

- Guidry, J. P. D., Meganck, S. L., Lovari, A., Messner, M., Medina-Messner, V., Sherman, S., & Adams, J. (2020). [Tweeting about #Diseases and #PublicHealth: Communicating Global Health Issues across Nations](#). Health Commun, 35(9), 1137-1145.
- Puri, N., Coomes, E. A., Haghighyan, H., & Gunaratne, K. (2020). [Social media and vaccine hesitancy: new updates for the era of COVID-19 and globalized infectious diseases](#). Hum Vaccin Immunother, 1-8.
- Bruine de Bruin, W., & Bennett, D. (2020). [Relationships Between Initial COVID-19 Risk Perceptions and Protective Health Behaviors: A National Survey](#). Am J Prev Med, 59(2), 157-167.
- Jenkins, E. L., Ilicic, J., Barklamb, A. M., & McCaffrey, T. A. (2020). [Assessing the Credibility and Authenticity of Social Media Content for Applications in Health Communication: Scoping Review](#). J Med Internet Res, 22(7), e17296.



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)

