

Environmental Health Sciences Center

Science for a healthy planet

Summer-Fall 2021 | Issue 12

Director's message: Looking toward the future, more hopeful

By Irva Hertz-Picciotto

The fall season finds UC Davis returning to a close approximation of 'normalcy,' with in-person classes, but more faculty and staff splitting their time between at-home and at-office. The pandemic's Delta variant surge exceeded last year's late summer surge and different from earlier variants, has deeply affected children and adolescents with strongholds in many areas of California. But the high rates of vaccination here in Davis, especially at the university, have proven to be effective in protecting a vast majority of us from COVID or at least its severe forms.

[Read more](#)

Research spotlight

Kent Pinkerton and **Bill Lasley** studied how the 2018 Camp Fire affected a colony of pregnant rhesus macaques at the California National Primate Research Center. Their research, which received national press attention and will be

UC Davis Environmental Health Sciences Center

Reimagining Health Equity in California's Future

Annual Retreat
October 25 & 26



More details coming soon.
Visit environmentalhealth.ucdavis.edu
for more information.

Annual Retreat

Reimagining Environmental Justice and Health Equity in California's Future is the theme of this year's retreat happening October 25 & 26. Featured speakers confirmed so far include:

- **Viola Waghiyi**, who is our keynote speaker and the Environmental Health and Justice Program Director for Alaska Community Action on Toxics. Waghiyi sits on President Biden's White House Environmental

published soon in Reproductive Toxicology, found that pregnant monkeys exposed to the smoke plume had a higher rate of miscarriage than monkeys not exposed to it. Read the research proof **2018 Camp Fire birth outcomes in non-human primates—a case-control study**.

Anti-Racism Committee

On July 22 about a dozen EHSC researchers and staff members met to talk about next steps in building an **anti-racism program** at our Center. Some of the ideas discussed included indigenous relationship building, a workplace assessment, student mentorship and developing a pipeline from high school to college of BIPOC science students.

Check out our new **anti-racism working groups** to see how you can get involved.

ARC meetings happen monthly and rotate to make it easier for people with varied schedules to attend. You can find the schedule of meetings in the **event calendar** on our website. Contact Shosha Capps (sacapps@ucdavis.edu) if you have questions.

Justice Advisory Council and is a Native Village of Savoonga tribal citizen and part of the Yupik indigenous community.

- **Dr. Susan Handy**, who is Director at National Center for Sustainable Transportation and a Professor at UC Davis. Her research focuses on the relationships between transportation and land use and strategies for reducing automobile dependence.
- **Seigi Karasaki**, who is a UC Berkeley PhD candidate focusing on the intersection of drinking water access, social justice, institutional capacity and individual agency. He is primarily interested in weaving together historical and current race- and class-driven disparities in water access, using a combination of community-based research methodologies and “big data” analyses. He holds a BA in East Asian Studies from UCLA (2011) and an MA in International Studies from the University of Tokyo (2014).

We're also assembling a youth panel of environmental justice climate activists from Northern California. More details coming soon.

Register now

Announcements

- Our upcoming Science Seminar with **Qi Zhang** and **Ameer Taha** is November 18. **More details coming soon in our event calendar**.
- The Peralta Community College District featured our documentary *Waking Up to Wildfires* in its **TV programming in September**. You can still watch the film on PBS through the end of 2021.

RESEARCH UPDATE

Recently published

It has been a busy year for EHSC scientists. See the most **recently published research** by Keith Bein, Deborah Bennett, Cristina Davis, Irva Hertz-Picciotto, Hong Ji, Nicholas Kenyon, Kent Pinkerton, Rebecca Schmidt, Tom Young and many others.

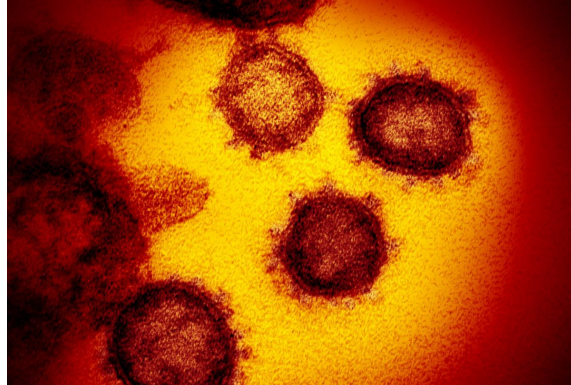
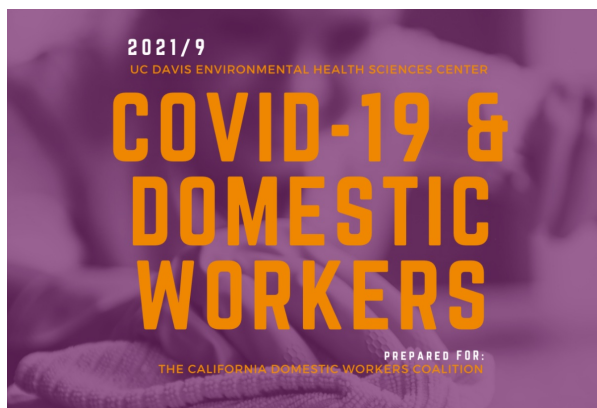


Wildfire research

Smoke from California has been so bad this year even Midwesterners have had to hunker down indoors. To help capture what's going on, the wildfire research team has been working hard over the summer getting ready to field two new wildfire surveys:

- The **Baseline 2020-21 Wildfire Survey** will capture experiences of those exposed to either the 2020 or 2021 wildfires and includes questions about COVID-19
- The **Follow-Up 2018 Wildfire Survey** will ask survivors of the 2018 fire season questions about their experiences since then, including how COVID-19 may have affected their health

The research team has been discussing, testing and refining questions in both surveys to illuminate cumulative impacts multiple wildfires and the pandemic have had on health. The research team will be emailing out 850 surveys to previous participating households and promoting the surveys online through paid ads and daily posts in Facebook groups. So far, 10,500 Californians have participated in this ongoing research project that began soon after the 2017 North Bay wildfires. The team is now discussing broadening the scope of its research to include populations nationally.



COVID-19 research

ÓRALE Project by the numbers

February 6, 2021 – October 1, 2021

- **11,545** total COVID-19 tests
- **593** COVID-19 total positive cases
- **319** ÓRALE testing events to date across Fresno, Madera, Stanislaus and Yolo counties

September 1, 2021-September 27, 2021

- **3,550** COVID-19 tests, with **266** COVID-19 positives cases

The surge of the Delta variant has hit these communities hard, in part because their vaccination rates have lagged behind much of the rest of California's population, and in part because the opportunities for transmission are greater: often multiple families live in homes built for single families, quarantining can be particularly challenging in such circumstances, farmworkers typically ride buses or crowd into cars to get to their worksites, and many of the other low-paying jobs are also on the frontline: meat packing, warehouses, food and other service industries (retail, health care, auto shop, gas stations).

The **ÓRALE Project** continues to provide rapid turnaround COVID-19 testing six days a week to farmworkers and other underserved Latino/a communities in Yolo, Fresno, Madera and Stanislaus counties. We've been busy: The team recently passed the 11,000-test mark and is rapidly approaching the 12,000 mark. As attention has shifted from testing to vaccination, ÓRALE has coordinated its work with vaccine providers to offer both services at the same sites.

The project now is gearing up to start collecting survey data from test takers. This data will help the research team understand the effects the COVID-19 pandemic has had on Latino/a communities in our focus counties. The topics covered by the survey include questions about workplace, family and social issues; emotional and other health-related outcomes.

New collaboration

Domestic workers survey

Domestic workers are the only group excluded from Cal/OSHA health and safety guidelines. They include people who clean homes, cook, take care of small children or provide services to elderly or disabled persons who need assistance with daily living. Our research team has been collaborating with the California Domestic Workers Coalition (CDWC) to collect information from their members on the workplace experiences they've had using our COVID-19 Survey for Workers. Jennifer Biddle, Mariela Peña, Irva Hertz-Picciotto and CDWC Director of Programs Megan Whelan created a report describing the impact of COVID-19 on their employment, income, and health, as well as employer practices, for example, in relation to personal protective equipment, or notification of infected individuals in the home. **[Read the report and recommendations.](#)**

ÓRALE's team of highly dedicated Clinical Research Coordinators and Laboratory Assistants has gone above and beyond, providing counseling services to positive cases and testing services on short notice in high-risk areas where living conditions make the spread of the COVID-19 virus more likely: migrant centers, agricultural migrant worker lodging facilities and community shelters. With the recent increase in cases and the emergence of the Delta variant, ÓRALE is committed to providing COVID-19 testing services to Latino/a communities living in remote and underserved areas in our focus counties. — *Irva Hertz-Picciotto, Íñigo Verduzco Gallo & Mariela Peña*

CENTER UPDATES



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2022-2023 Pilot Projects

The **[2022-2023 Pilot Projects Request for Proposals](#)** is out. Concept letters are due October 22 at 4 PM. Check out our new **[Community Research Priorities](#)** list and **[community-engaged research training materials](#)** if you're interested. Visit our **[Pilot Projects page](#)** for updates.

2021 Seed Awards

We're happy to announce this year's **[Seed Awards](#)** have gone to:

- **Tom Young** for *Defining the chemical detectability domain for nontarget analytical methods* (Environmental Exposure Core)
- **Lisa Miller** for *Cardiovascular effects of early life wildfire smoke exposure* (Integrative Health Sciences Facility Core)

- **Christopher Royer** for *Airway mucosal effects of simulated wildfire smoke exposure* (Environmental Exposure Core & Integrative Health Sciences Facility Core)
- **Randy Carney** for *Raman spectroscopy assay to profile wildfire-associated pollutants in human biofluids*. (Environmental Exposure Core & Integrative Health Sciences Facility Core)

Fall CSTAC Meeting

The Fall Community Stakeholder Advisory Committee Meeting took place September 27 on Zoom. The meeting was open to community partners, pilot project researchers and anyone curious about community-engaged research. About 30 people attended and got to hear updates on last year's pilots from:

- **Jasquelin Peña** who spoke about the impact of the Caldor Fire on the Cosumnes River watershed and her partnerships with the American River Conservancy and other local groups.
- **Keith Bein** who shared wildfire air pollution data and how he's fingerprinting chemicals from emissions.
- **Dipak Ghosal, Natalia Deeb-Sossa and Jane Sellen** who talked about developing a pesticide notification app to understand how notices of intent for pesticide applications affect community response (check out their new **Say Before You Spray** website).
- **Hong Ji** who discussed epigenetic memory in early life exposure to wildfire smoke and how that affects the immune system and lung health.

NorCal Symposium on Climate, Health & Equity

The NorCal Symposium on Climate, Health, and Equity took place virtually on September 24th, 2021, sponsored by three Northern California universities: UC Davis, UCSF and Stanford University.

The keynote speaker was **Dr. Robert Bullard**, who is known as the "Father of Environmental Justice," spearheaded that movement in the late 1980/early 1990s and has **published numerous books** such as *Race, Place and Environmental Justice After Hurricane Katrina* and *The Wrong Complexion for Protection*. Dr. Bullard gave an inspiring speech about how communities can bring about change through civic engagement, organizing and working with allies—including researchers who help to gather evidence about disproportionate exposures and harms. He urged the audience to call out racism, especially when it is codified in policies and decisions, and to not give up.

Drs. Irva Hertz-Picciotto, Angela Haczku and Kathryn Conlon, as well as several UCDH medical students were part of the organizing committee. The medical students held listening sessions with various community organizations, which then participated in the four workshops, covering: Sustainable Healthcare, Education, Food Systems, and Wildfires and Air Pollution.

The final session of the afternoon, "Healthcare Institutions and Climate Justice" featured four healthcare leaders: **Dr. David Lubarsky**, CEO of UC Davis Health, **David Entwistle**, CEO of Stanford Healthcare, and **Dr. Sam Hawgood**, Chancellor of UCSF, and **Dr. Doris Browne**, former president of the National Medical Association, and was moderated by **Dr. Theresa Maldonado**, Vice President for Research and Innovation for UCOP.

Following the formal sessions, Zoom "Happy Hours" were offered by various participating organizations, with UC Davis one bringing together faculty and students to discuss next steps in addressing Climate Change and Health at UC Davis.

Next year's NorCal Symposium will be hosted by UC Davis. If you would like to join this group or help plan for next year's event, please email Ruth Williams at (ruwilliams@ucdavis.edu).

Backpack Project

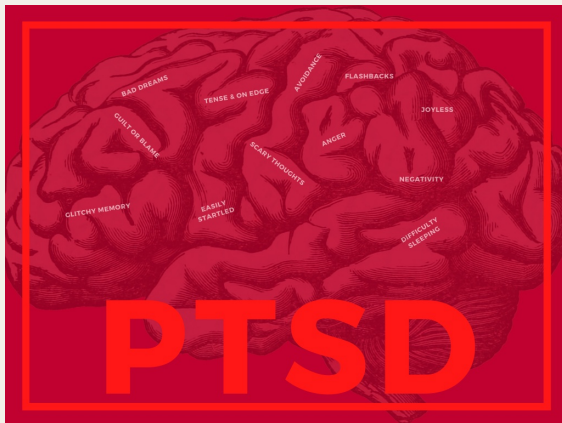
Nayamin Martinez is Executive Director of the **Central California Environmental Justice Network** and co-chair of the CSTAC. She questioned why Central Valley growers were so upset by a small research project she has been working on with our Center. **Read Nayamin's account of the study and how BigAg panicked.**

In the news

- Cristina Davis in **A COVID test as easy as breathing**, in *The New York Times*.
- Kent Pinkerton in **Strike team fighting Caldor Fire pulled because of COVID outbreak, prompting warning**, in *The Sacramento Bee*.
- Jonathan London in **Can California reduce dairy methane emissions equitably?**, in *Inside Climate News*.
- Nayamin Martinez in **Tulare County Ag Commissioner backtracks on pesticide study**, in *The Visalia Times Delta*.
- Deborah Bennett in **Pesticide study renews conflict between growers, environmental justice groups** in Bakersfield.com.

American Public Health Association Annual Conference & Film Festival

APHA selected EHSC's documentary short **Air, Water, Blood: The Power of Community-Engaged Research** to screen at its Annual Conference & Film Festival in October. Some 25,000 people participate in the APHA Conference, where they will be able to watch the video and join in a discussion. Independent Filmmaker Paige Bierma, EHSC's Dr. Jonathan London and Pilot Project grantee and Dr. Clare Cannon will be fielding questions about the film, our pilot project in Kettleman City and how to build community-engagement into research.



PTSD Awareness Day

To promote EHSC's wildfire research on June 27 for PTSD Awareness Day, Digital Strategist **Jennifer Biddle** and Editorial Assistant **Maddie Hunt** featured 1-minute clips about PTSD from our documentary *Waking Up to Wildfires*, then linked to EHSC's **wildfire data map**.

In the film, CalFire Captain Jason Novak, Sonoma residents Jack and Charlotte Thomas and Coffey Park mom/daughter duo Daysi and

Dayren Carreño talk about how PTSD affected their lives after the 2017 North Bay Firestorm. The campaign on **Twitter**, **Facebook** and **Instagram** reached 90,000 people who shared, re-tweeted or liked it more than 1,200 times and spiked our website's traffic by 340 percent. Some of the high-profile engagements came from CalFire and the National Center for PTSD.

EHSC's digital team will continue to focus on wildfires through the end of the year to help promote the work the Center does and recruit new study participants into ongoing wildfire research. Their next campaign will focus on **smoke waves** and **Keith Bein's** latest research.

ÓRALE Project

ÓRALE's communications and social media manager **Clarisse Céspedes** recently set up an **ÓRALE Instagram page** to promote testing among Spanish speakers. The page's reach has grown 38% month-over-month—a huge success! Meanwhile, the **ÓRALE Facebook page** remains the main hub for people asking questions about the project and where they can get tested. ORALÉ also has a **new website** to keep our Spanish-language audience aware of all the COVID-19 health services available to them. **Watch this new video about the project.**



Our Center has been collaborating with the **California Domestic Workers Coalition** (CDWC) on the COVID-19 Survey for Workers ([read the official report here](#)) and making a documentary about its members, COVID-19 and **SB 321**, the Health and Safety for All Workers Act. SB 321 sought to end the exclusion of domestic workers from Cal/OSHA protections.

Over the summer, filmmaker Paige Bierma, Public Policy Intern Kyle Kreuger and Producer

Jennifer Biddle interviewed Senator María Elena Durazo (D-Senate District 24), the bill's sponsor. Durazo is the daughter of Mexican immigrants who grew up working in agricultural fields in California. She later became an attorney, union official and champion of workers' rights.

SB 321 was all but dead in the Assembly until Governor Newsom's team negotiated major revisions. The new version of the bill establishes a committee through Cal/OSHA of employers and domestic workers tasked with creating voluntary safety guidelines. Governor Newsom signed the bill into law on September 27.

Our 30-minute documentary about CDWC's quest to develop a public health policy that covers all workers—including the undocumented—will be finished by the end of the year. We plan to pitch it to PBS.

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