

## Mentored Fellowship Opportunities

HEI's new [summer fellowship program](#) will be awarding 4 funded fellowships for 10-week to 12-week summer programs. As part of the application process, we have 17 mentor options for applicants to choose from, located around the country. The list is organized by geographic location, recognizing it might be easier to attend an opportunity closer to where you live. In addition to the project itself, you should consider other factors that could help determine what may be a great opportunity for you.



For example, one of the 17 opportunities is fully remote; all others are a combination of in-person and remote work. In some cases, you might be the only undergraduate student, whereas other opportunities are part of a larger program where you will interact with other students. Many opportunities include participation in lab meetings and webinars. Sometimes additional training is provided. Some opportunities are solely focused on research, whereas others include community outreach or science communication.

We hope there are opportunities that are just right for you! Please select up to 3 mentor opportunities in which you are interested. **Then click on [this link](#) to start the application process.** We ask you to tell us about yourself and your goals, your background, what motivates you to apply to this fellowship, and other information that will help us during the selection process. We also ask you to include an unofficial transcript of your classes.

Thank you in advance for your time. We look forward to reading your application. If you have any questions or feedback, please email us at [fellowship@healtheffects.org](mailto:fellowship@healtheffects.org).

## List of Opportunities

#	Mentor	Affiliation	State
<i>New England</i>			
1	<a href="#">Marie-Abele Bind</a> , Biostatistician	Massachusetts General Hospital	MA
2	<a href="#">Robin Dodson</a> , Associate Director of Research Operations	Silent Spring Institute	MA
3	<a href="#">Jon Levy</a> , Professor and Chair	Boston University School of Public Health	MA
<i>Middle Atlantic</i>			
4	<a href="#">Peng Gao</a> , Assistant Professor	University of Pittsburgh	PA
5	<a href="#">Albert Presto</a> , Research Professor	Carnegie Mellon University	PA
6	<a href="#">Sally Pusede</a> , Associate Professor	University of Virginia	VA
7	<a href="#">Kabindra Shakya</a> , Associate Professor	Villanova University	PA
8	<a href="#">Daniel Westervelt</a> , Assistant Research Professor	Columbia University, Lamont Doherty Earth Observatory	NY
<i>South Atlantic</i>			
9	<a href="#">Yang Liu</a> , Distinguished Professor and Department Chair	Emory University, Rollins School of Public Health	GA
10	<a href="#">Jennifer Richmond-Bryant</a> , Associate Professor of the Practice	North Carolina State University	NC
<i>Pacific</i>			
11	<a href="#">Joshua Apte</a> , Associate Professor and Libby Koolik (direct supervisor), PhD student	University of California, Berkeley	CA
12	<a href="#">Elizabeth Noth</a> , Associate Researcher	University of California, Berkeley	CA
13	<a href="#">Yanelli Nunez</a> , Scientist	PSE Healthy Energy	CA
14	<a href="#">Regan Patterson</a> , Assistant Professor	University of California, Los Angeles	CA
15	<a href="#">Nancy L Villasenor</a> , Health Educator	Office of Environmental Health Hazard Assessment (Part of California EPA)	CA
16	<a href="#">Jun Wu</a> , Professor	University of California, Irvine	CA
<i>Fully Remote</i>			
17	<a href="#">Colleen Marciel Rosales</a> , Strategic Partnerships Director	OpenAQ	N/A

Detailed mentor descriptions are listed below.

## New England

### 1 Marie-Abele Bind, Biostatistician, Massachusetts General Hospital (Harvard University affiliate) and Harvard Medical School, MA

**Website:** <https://scholar.harvard.edu/marie-abele/home>

**Description of the Opportunity:** Statistical analysis training on an environmental health project, with a focus on causal inference, that is determining whether an environmental factor *actually* causes an adverse effect on a health outcome. The candidate will be trained in Frequentist and Fisherian inference. Possible topics include estimating the effect of environmental exposures (e.g., temperature extremes, air pollution, PFAS) on health outcomes (e.g., mortality, epigenetics, COVID-19).

**We anticipate that the fellow will gain the following skills or experiences:** Data Analysis, Causal inference, Communicating Science, and Writing.

**The student will meet with the direct supervisor:** several times a week and the experience will be primarily on site.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings, Departmental meetings.

**The lab size is:** 1 faculty, 2 postdocs, 3 PhD students, 3 Masters students, and 3 undergraduate students. We expect the student will interact with 2-5 other undergraduates and graduate students through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Computer, Access to high-powered computing cluster, Departmental seminars, Presentations to lab group, Ability to attend trainings provided by other summer programs. The fellow has the option to attend Harvard QBio seminars.

### 2 Robin Dodson, Associate Director of Research Operations, Silent Spring Institute, MA

**Website:** [www.silentspring.org](http://www.silentspring.org)

**Description of the Opportunity:** We conduct community-based environmental health research. Internship experiences vary, depending on the timing of our research projects. Responsibilities may include literature searches, interviews with study participants, environmental sampling, data analysis and management, and writing, among other activities. Examples of previous and projected intern activities:

- Identify, review, and summarize toxicological data for chemicals used in consumer products, including chemicals marketed as safer.
- Inventory local and online retailers to evaluate accessibility of safer consumer products.
- Systematically review literature about chemical exposures in various occupations, geographies, or demographic groups.

- Use R programming to organize and visualize different types of measurement data, for example, chemical exposure measurements.
- Review scientific literature to gather parameters needed to develop fate and transport groundwater models for persistent PFAS compounds.
- Contribute to systematic reviews of epidemiological studies of environmental contributors to breast cancer or other outcomes.
- Contribute to blog post on the implementation of the Toxic Substances Control Act (TSCA) and its implications for public health.
- Create an instructional video on how to use Silent Spring's online tool for helping private well owners interpret their water test results.
- Interview breast cancer activists about their concerns related to chemical exposures.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Communicating Science.

**The student will meet with the direct supervisor:** At least weekly, more often if needed and the experience will be primarily Hybrid.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 18 research staff and 2 postdocs. This person may be the only undergraduate intern in summer 2023.

**Other resources available to students include:** Desk/office space, Computer, Departmental seminars, Presentations to lab group.

### 3 Jon Levy, Professor and Chair, Boston University School of Public Health, MA

**Website:** <https://www.bu.edu/sph/profile/jonathan-levy/>

**Description of the Opportunity:** There are multiple candidate projects, but the most likely would involve work on a project to characterize cumulative climate impacts in the Mystic River Watershed. We will be developing a high-resolution geospatial database characterizing exposures, vulnerability, and co-occurrence of hazards; developing impact models to highlight locations prone to cumulative climate risks and chemical hazards; and using multi-stressor epidemiological analyses to characterize impacts. We will work with a community-based organization to ensure our models inform policies and local investments to protect health. The primary supervisor will depend on the specific tasks. It may be me, my colleague Amruta Nori-Sarma, or a post-doc or PhD student working on the project.

**We anticipate that the fellow will gain the following skills or experiences:** Data Analysis, Communicating Science.

**The student will meet with the direct supervisor:** Daily and the experience will be primarily In-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings, Not yet planned, but likely a blend of in-person and virtual.

**The lab size is:** 20 (all responses below reflect the department overall, not this specific grant - we don't work in a "lab" model) faculty, 12 research staff, 9 postdocs, 22 PhD students, and 10 Masters students. We expect the student will interact with 2-5 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Computer, Access to high-powered computing cluster, Presentations to lab group. We may be able to provide some summer funding, depending on the specifics of the project and tasks.

**Other information the potential mentor wanted student applicants to know:** There are numerous research projects within the Department of Environmental Health at BUSPH, with a vibrant community of graduate students, post-docs, staff, and faculty. Many projects focus on environmental justice issues and are highly collaborative, so regardless of the project, you would work with a number of different people. We typically have a few undergraduates working over the summer. The specifics of the opportunity and the research group would be figured out closer to the summer.

## Middle Atlantic

### 4 Peng Gao, Assistant Professor, University of Pittsburgh School of Public Health, PA

**Websites:** <https://penggaolab.github.io/>; <https://www.sph.pitt.edu/directory/peng-gao>

**Description of the Opportunity:** Our lab focuses on multidisciplinary fields in environmental health sciences, environmental chemistry and toxicology, analytical chemistry, and metagenomics by applying various mass spectrometry, sequencing, and computational technologies. We have various ongoing projects by applying exposomics approaches to study the etiology of various idiopathic and chronic diseases such as asthma and lung cancers. We also have pure computational projects such as data analyses on large databases that are related to environmental health as well as the bioinformatics/cheminformatics analyses of mass spectrometry and sequencing data. Thus, the training can be pure web lab, pure dry lab, or hybrid tailored based on the trainee's situation. We will discuss the potential projects that fit the trainee's research interest at the beginning of the summer project.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Laboratory Analysis, Applying for graduate schools or jobs.

**The student will meet with the direct supervisor:** 2-3 times per week and the experience will be primarily Hybrid. (Can be in-person training but I am not able to provide financial support on housing and transportation.)

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings, Departmental meetings.

**The lab size is:** 1 faculty, 1 PhD student, and possibly 1 postdoc. This person will be the only undergraduate in the summer 2023.

**Other resources available to students include:** Dedicated laboratory space, Laboratory supplies and access to equipment, Access to high-powered computing cluster, Departmental seminars, Professional development seminars, Presentations to lab group.

## 5 Albert Presto, Research Professor, Carnegie Mellon University, PA

**Website:** <https://particulate-matter.cmu.edu/>

**Description of the Opportunity:** My group focuses on exposures to both traditional (e.g., PM<sub>2.5</sub>) and novel (e.g., ultrafine particles, source-resolved PM) air pollutants in urban environments. Ongoing and proposed projects include: (1) spatial modeling and environmental justice analysis of source-resolved PM and UFP exposures in multiple US cities, (2) mobile sampling campaigns aimed at hotspot detection for air toxics, (3) laboratory-scale investigations of exposure-relevant PM transformations in urban atmospheres, and (4) development of novel low-cost sensors for use in indoor and outdoor exposure assessment. Students will therefore have the chance to pick between field work, laboratory studies, and geospatial modeling.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Laboratory Analysis, Communicating Science.

**The student will meet with the direct supervisor:** Weekly and the experience will be primarily In-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 1 faculty, 1 postdoc, and 6 PhD students. We expect the student to interact with 6-10 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Dedicated laboratory space, Laboratory supplies and access to equipment, Access to high-powered computing cluster, Specialized software, Departmental seminars, Presentations to lab group.

**Other information the potential mentor wanted student applicants to know:** Working in my group is a great opportunity for anyone who wants to get exposure to laboratory and/or field work. We have a large and well-equipped lab with state-of-the-science equipment. There is a large group of students sharing the lab in the summer - the lab is shared across multiple faculty with about 30 students using the lab at any time - so there is ample opportunity to interact with and learn from other students. The fellow will have the chance to attend and present at the weekly seminar series organized by graduate students at the Center of Atmospheric Particle Studies.

## 6 Sally Pusede, Associate Professor, University of Virginia, VA

**Website:** <https://pusede.evsc.virginia.edu>

**Description of the Opportunity:** Air pollution is highly variable in space and time, which has important consequences for human health. Traditional air monitoring has been unable to capture this spatiotemporal variability, and, as a result, there are large uncertainties regarding the emission sources, climate controls, policy responses, and impacts of air pollution at neighborhood scales. With the launch of new high spatial- and temporal-resolution satellite sensors, we have unprecedented opportunities to describe, explain, and inform decision-making around neighborhood-level air quality and environmental justice. This project will use satellite observations to investigate air pollution inequalities in U.S. cities or rural areas and to advance knowledge of their biases and uncertainties as well as our understanding of the drivers of their unequal distribution. Students will learn a variety of data analysis techniques, work with satellite datasets, and develop their coding skills (previous experience not required).

**We anticipate that the fellow will gain the following skills or experiences:** Data Analysis, Outreach, Applying for graduate schools or jobs, Communicating Science.

**The student will meet with the direct supervisor:** At least weekly, but potentially more often, especially as the project gets started and the experience can be in person or remote, both are equally possible.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 1 faculty, 2 postdocs, and 4 PhD students. We expect the student will interact with 2-5 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Computer, Access to high-powered computing cluster, Specialized software, Presentations to lab group.

## 7 Kabindra Shakya, Associate Professor, Villanova University, PA

**Website:** <http://www24.homepage.villanova.edu/kabindra.shakya/>

**Description of the Opportunity:** The student can work on the project assessing exposure of air pollutants. The project can be decided based on the mutual interest with the students. My lab can provide support for instrumentation and guidance on the student-selected project.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Laboratory Analysis, Outreach, Applying for graduate schools or jobs, Communicating Science, Geographical Information System.

**The student will meet with the direct supervisor:** Weekly and the experience will be primarily In-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 1 faculty, 2 Masters students, and 3 undergraduate students. We expect the student will interact with 2-5 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Dedicated laboratory space, Laboratory supplies and access to equipment, Computer, Specialized software, Presentations to lab group, Ability to attend trainings provided by other summer programs. The university organizes



workshops for undergraduates for summer research students regularly. It's usually for 1-2 hours held every 1-3 weeks. It is possible (but not guaranteed) that the University may provide additional support.

## 8 Daniel Westervelt, Assistant Research Professor, Columbia University, Lamont Doherty Earth Observatory, NY

**Website:** <https://aerosol.ldeo.columbia.edu/>

**Description of the Opportunity:** Working hands on with hybrid reference and low cost PM<sub>2.5</sub> sensor networks. Data analysis including sensor bias correction and source attribution techniques. Strong potential for fieldwork travel if student is interested (most likely in Africa).

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Outreach, Applying for graduate schools or jobs, Communicating Science.

**The student will meet with the direct supervisor:** At least weekly but more often if needed and the experience will be primarily In-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings, Departmental meetings.

**The lab size is:** 1 faculty, 2 PhD students, and 2 undergraduate students. We expect the student will interact with >10 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Dedicated laboratory space, Laboratory supplies and access to equipment, Access to high-powered computing cluster, Specialized software, Departmental seminars, Professional development seminars, Presentations to lab group, Ability to attend trainings provided by other summer programs. If interested in fieldwork, resources including transportation to the site, lodging, meals, etc. will be provided. Pending results and performance, presentation at a national conference such as AGU or similar is possible.

## South Atlantic

### 9 Yang Liu, Distinguished Professor and Department Chair, Emory University, Rollins School of Public Health, GA

**Website:** <https://scholarblogs.emory.edu/remote-sensing-group/>

**Description of the Opportunity:** The Emory environmental remote sensing group currently offers the following research training opportunities: (1) statistical and machine learning-based modeling of air pollutants including fine particulate matter (PM<sub>2.5</sub>) and ozone in the US, India, and Peru, (2) assessment of wildfire smoke exposure in the western US, (3) study of the adverse cardiovascular health effects due to chronic and acute exposure to fire smoke, (4) development of global wildfire population exposure indicators, (5) analysis of speciated pollen counts from real-time sensors, (6) exploratory satellite-based environmental data product development to support environmental justice communities in Atlanta.



**We anticipate that the fellow will gain the following skills or experiences:** Data Analysis, Applying for graduate schools or jobs, report and manuscript preparation.

**The student will meet with the direct supervisor:** Weekly and the experience will be primarily In-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 1 faculty, 1 research staff, 3 postdocs, 3 PhD students, 4 Masters students, and 1 undergraduate student. This person will be the only undergraduate in summer 2023.

**Other resources available to students include:** Desk/office space, Computer, Access to high-powered computing cluster, Departmental seminars, Presentations to lab group.

## 10 Jennifer Richmond-Bryant, Associate Professor of the Practice North Carolina State University, NC

**Website:** <https://cnr.ncsu.edu/directory/jennifer-bryant/>

**Description of the Opportunity:** I would have the student work on an analysis of air quality in Colfax, LA based on data we are obtaining in our field study as part of the LSU Superfund Research Center. Colfax is home to the only commercially-operating open-burn hazardous waste facility in the U.S. We are taking several different types of measurements, so the specific analysis will depend on the student's interest. The student may also have an opportunity to accompany the research team to our field site for sampling dust in a study of participants' homes. The student may also help prepare communication materials and meet community members.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Applying for graduate schools or jobs, Communicating Science.

**The student will meet with the direct supervisor:** Daily and the experience will be primarily In-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor.

**The lab size is:** 1 faculty, 1 postdocs, 4 PhD students, and 2 undergraduate students. This person will be the only undergraduate in summer 2023.

**Other resources available to students include:** Desk/office space, Computer (possibly, if needed), Specialized software, Presentations to lab group.

**Other information the potential mentor wanted student applicants to know:** My research involves analysis of measurement data, modeling, some qualitative analysis, and community engagement related to air pollution exposure in marginalized communities. The student will have the choice of participating in aspects of all of these areas or to specialize in one area that is of most interest to them. The undergraduates currently working with me at NC State will not be there over the summer, but I would be willing to take two HEI fellows to create a cohort for the students. I might be able to enroll the fellow in a week-long summer training program in environmental health at Morehouse School of Medicine, depending on timing (not guaranteed).

## Pacific

### 11 Joshua Apte, Associate Professor and Libby Koolik (direct supervisor), PhD student, University of California, Berkeley, CA

**Website:** <http://apte.berkeley.edu>

**Description of the Opportunity:** Air pollution exposure disparities among racial and ethnic groups within California are well-documented, and there is now a pressing need to identify mitigation pathways that can rapidly address this problem. Using a suite of high-resolution air pollution modeling tools we have developed for estimating how specific sources impact PM<sub>2.5</sub> exposure and disparities, the summer research fellow would evaluate strategies for mitigating exposure disparities in California environmental justice (EJ) communities. The goal would be to quantify and critically analyze the concentration reduction and disparity mitigation potential of a proposed location-focused community-centered emissions reduction strategy.

**We anticipate that the fellow will gain the following skills or experiences:** Air quality modeling, Data Analysis, Environmental justice analyses, applying for graduate schools or job.

**The student will meet with the direct supervisor:** Weekly and the experience will be primarily in-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 1 faculty, 1 research staff, 1 postdoc, 5 PhD students, and 1 undergraduate student. This person will be the only undergraduate student in summer 2023.

**Other resources available to students include:** Desk/office space, Dedicated laboratory space, Computer, Specialized software, Presentations to lab group.

### 12 Elizabeth Noth, Associate Researcher and co-director Industrial Hygiene Program, University of California, Berkeley, CA

**Website:** <https://publichealth.berkeley.edu/people/elizabeth-noth/>

**Description of the Opportunity:** I am an air pollution exposure scientist with over 20 years of experience in exposure assessment for epidemiology and over 10 years in occupational exposures. Because of my broad interests, I can support a summer fellow on a number of different topics it is difficult to list them all. Past summer intern projects have included comparing air pollution concentrations from wildland-urban interface fires versus wildland fires; heat exposures to warehouse workers; and environmental justice and at-school exposures to air pollutants. I am open to environmental or occupational research, and have some datasets to support both. I am accustomed to working with undergrads on summer projects and prefer to discuss with them what they want to learn. In the summer of 2023, I would also be able to provide some experience in an active field study in epidemiology and exposure.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Laboratory Analysis, Outreach, Applying for graduate schools or jobs, Communicating Science.

**The student will meet with the direct supervisor:** Weekly and the experience will be primarily In-person, but hybrid is available if necessary.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 2 faculty, 1 research staff, 3 PhD students, 2 Masters students, and 1 undergraduate student. We expect the student will interact with 6-10 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Dedicated laboratory space, Laboratory supplies and access to equipment, Specialized software, Presentations to lab group, Ability to attend trainings provided by other summer programs. The fellow would be welcome to attend the STEER (Short-term Educational Experience in Research) program along with ~9 other undergrads and run by the Center for Occupational Health (<https://www.coeh.berkeley.edu/steer>).

### 13 Yanelli Nunez, Scientist, PSE Healthy Energy, CA

**Website:** <https://www.psehealthyenergy.org/>

**Description of the Opportunity:** The student will have the opportunity to work on a project evaluating climate-related racial and economic disparities, their impact on health, and potential policy solutions. In summary, we utilize an existing spatiotemporally resolved lower-cost air monitoring network in Richmond, CA, and aggregate data from other networks across Contra Costa County for three aims: (1) characterize local disparities in exposure to air pollution, heat, and humidity, and the impact of wildfires on exacerbating these disparities; (2) assess relationships between exposure and perinatal outcomes; and (3) model community-driven interventions and policies to reduce exposures and health impacts.

**We anticipate that the fellow will gain the following skills or experiences:** Data Analysis, Applying for graduate schools or jobs, Communicating Science, Science policy, collaborating with community-based organizations.

**The student will meet with the direct supervisor:** I'm flexible and happy to accommodate the needs and preferences of the student. The PSE headquarters is in Oakland, CA; however, I work remotely from New York City. Most of my interactions with the student will likely be virtual, but I can coordinate a week at Oakland to meet in person and for the student to visit the office and meet everyone else on the team. If the student is located in Oakland, they are welcome to work from the PSE office. If the student lives in the NYC area, I am happy to coordinate a couple of in-person meetings.

**The following meetings will be held in person:** Please see above.

**The lab size is:** This person will be the only student working with me in summer 2023. We expect the student will interact with 2-5 other undergraduate students through the organization.

**Other resources available to students include:** Desk/office space, Access to a high-powered computing cluster, Specialized software, and Presentations to research groups.

**Other information the potential mentor wanted student applicants to know:** PSE is a small (25-people) non-profit policy and energy research institution. We are passionate about using high-quality science to inform energy policy. We are a highly cross-disciplinary organization (epidemiologists, geoscientists, engineers, physicists, etc.) and strongly collaborate with government and community-based organizations. We are also a friendly and supportive team.

## 14 Regan Patterson, Assistant Professor, University of California, Los Angeles, CA

**Website:** <https://samueli.ucla.edu/people/regan-patterson/>

**Description of the Opportunity:** The undergraduate student will support a project that examines microplastic and metal concentrations in Los Angeles. Locations with varying levels of vulnerability have been identified using CalEnviroScreen 4.0, a Census-tract level mapping tool developed by the California Office of Environmental Health Hazard Assessment. The student will collect dust samples at public school sites in each neighborhood and measure microplastic and metal concentrations in the lab. There is also an opportunity to conduct regression analyses to quantify the relationship between spatial predictors, such as highway proximity, in order to understand microplastic exposure risk.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Laboratory Analysis.

**The student will meet with the direct supervisor:** 2-3 times per week and the experience will be primarily In-person.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 2 faculty, 1 PhD student, and 4 undergraduate students. We expect the student will interact with 2-5 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Laboratory supplies and access to equipment, Computer, Presentations to lab group.

**Other information the potential mentor wanted student applicants to know:** My lab focuses on environmental justice. This particular project will help understand the relationship between microplastics pollution and areas with vulnerable populations.

## 15 Nancy L Villasenor, Health Educator, Office of Environmental Health Hazard Assessment (Part of California EPA), CA

**Website:** <https://oehha.ca.gov/pesticides>

**Description of the Opportunity:** The project will consist of assisting the Pesticide Epidemiology Section of OEHHA in tailoring existing educational materials to Mexican indigenous communities such as Mixtec, Zapotec, and Triqui, based on the results obtained from a pilot study performed by OEHHA and UC Merced which evaluated where farmworkers suffering from pesticide-related symptoms seek care, what self-care practices they use, and their communication preferences. With findings from this study OEHHA seeks to tailor health education materials toward Mexican indigenous communities and to distribute them more broadly among healthcare professionals. The student will work with the supervisor to explore culturally and linguistically appropriate ways to convey pesticide-related illnesses to various audiences, including patients who might be agricultural workers, health advocates, and health care providers. Potential materials may include graphic stories in written and audio-visual form.

**We anticipate that the fellow will gain the following skills or experiences:** Health Education, outreach, and science communication. The student could be part of the summer internship program and will have access to weekly presentations on scientific topics, and will receive training on career and development. They will also have an opportunity to meet with people in other boards and departments at CalEPA and a student symposium (optional).

**The student will meet with the direct supervisor:** Weekly or biweekly as needed. The experience will be primarily virtual unless the student is able and willing to meet in person (at OEHHA's Sacramento office).

**The following meetings will be held in person:** Meetings with primary direct supervisor.

**The lab size is:** 5 research staff: a data scientist/exposure modeler, two toxicologists, a health educator, and a health officer.

**Other resources available to students include:** Desk/office space, Computer.

## 16 Jun Wu, Professor, University of California, Irvine, CA

**Website:** <https://drwulab.net/>

**Description of the Opportunity:** 1. Community-based participatory research focusing on environmental justice and health equity. 2. Data driven research focusing on exposure assessment of air pollution, built environment, and climate change related exposures. 3. Environmental epidemiological studies examining associations between various environmental exposures (e.g. wildfire smoke, heat, lack of green space) on health outcomes (e.g. pregnancy outcomes, respiratory and cardiovascular outcomes, mental health). 4. Literature/document review and analysis related to climate change resilience and mitigation, as well as environmental justice focusing on actions.

**We anticipate that the fellow will gain the following skills or experiences:** Fieldwork, Data Analysis, Outreach, participate with more senior students on writing manuscript/report.

**The student will meet with the direct supervisor:** A couple of times per week and the experience can be hybrid or remotely, depending on the type of projects.

**The following meetings will be held in person:** Meetings with primary direct supervisor, Lab or group meetings.

**The lab size is:** 1 faculty, 2 research staff, 4 PhD students, 2 Masters students, and 8 undergraduate students. We expect the student will interact with 2-5 other undergraduates through the lab, student area, or departmental events.

**Other resources available to students include:** Desk/office space, Computer, Access to high-powered computing cluster, Specialized software, Departmental seminars, Presentations to lab group.

## Fully Remote

### 17 Colleen Marciel Rosales, Strategic Partnerships Director, OpenAQ, remote organization

**Website:** <https://openaq.org/#/>

**Description of the Opportunity:** At OpenAQ, we can provide avenues where the intern can hone their science communication, outreach, and project management skills. Projects in line for the intern include:

(1) Outreach to community-based organizations, public health organizations, university units and academicians working on the public health space, as well as environmental justice groups, to initiate and form a relationship with OpenAQ and assist with the partner organizations' data analysis needs;

(2) Writing impact stories / essays / blogs from the data we have gathered from scraping the web for impacts and mentions of OpenAQ. The intern is also free to use more advanced data and visualization tools or impact tracker tools (like Web of Science, Google Scholar API, etc) to write the impact stories if they choose. They are also free to do more data-intensive analysis if they so choose, and have the support of our software team;

(3) Forming a publicly-shareable repository of databases for climate and air quality data ("repository of repositories");

(4) Logistical support for the Community Ambassador program, which will be held in 2023. As part of the logistics team, the intern can also attend the programs intended for the Community Ambassador and increase their network.

We are a completely remote organization, thus we won't be able to provide a physical office space. This internship is intended for those interested in outreach and science communication on a global scale, and while it will not be intensive on learning to use the OpenAQ platform, the resources and the software team will be available.

**We anticipate that the fellow will gain the following skills or experiences:** Outreach, Communicating Science, Project Management.

**The student will meet with the direct supervisor:** Weekly and the experience will be primarily Remotely.

**The following meetings will be held in person:** All meetings will be virtual.

**The lab size is:** 1 outreach/research staff, 1 executive director, 2 software people. This person will be the only undergraduate in summer 2023.

**Other resources available to students include:** Professional development seminars, Ability to attend trainings provided by other summer programs. Depending on the timing, the fellow can attend trainings or workshops held by OpenAQ. The fellow will also be assisting our Ambassador Program and will have access to Ambassador trainings offered.

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Click on [this link](#) to start the application process.

Please contact us if you have any questions: [fellowship@healtheffects.org](mailto:fellowship@healtheffects.org)