UC DAVIS
ENVIRONMENTAL HEALTH SCIENCES CENTER

OVEREXPOSED & UNDERPROTECTED

2022 Annual Retreat of the UC Davis Environmental Health Sciences Center

UC Davis Conference Center & Online

We acknowledge that we are gathering for this retreat within the unceded territory of California that is home to nearly 200 tribal nations. We humbly acknowledge and honor the original inhabitants of our various regions. The Environmental Health Sciences Center is based in Sacramento and Davis, on unceded lands stolen from Native peoples to form the University of California campuses.

To the original inhabitants of this land: To the Nisenan people, To the Southern Maidu to the North, To the Valley and Plains Miwok/ Me-Wuk peoples to the south of the American River, To the Patwin Wintun peoples to the west of the Sacramento River, To the people of the Wilton Rancheria surrounding Elk Grove, To the Cachil DeHe Band of Wintun Indians of the Colusa Indian Community, To the Kletsel Dehe Wintun Nation, and To the Yocha Dehe Wintun Nation: **May we honor your ancestors who came before the colonizers and whose descendants still walk beside us today.**

For the contribution of countless elders, activists, healers, families, loved ones, and Peoples in forming the history of the region where we reside today, we thank you.

In acknowledgement of the genocide and displacement of the indigenous peoples of California,
we invite those who have benefited from the seizure of Native Lands to
consider taking part in a form of financial reparation:
Nisenan Ancestral Homelands Reciprocity Program | Sacramento Native American Health Center
News from Native California

MONDAY, Oct 3

8:30 AM – 9:10 AM Registration & Coffee

9:10 AM – 9:30 AM WELCOME REMARKS

- Dr. Cristina Davis | Associate Vice Chancellor for Research, UC Davis Office of Research
- Dr. Ted Wun | Associate Dean for Research and CTSC Director, UC Davis School of Medicine
- Dr. Helene R. Dillard | Dean, UC Davis College of Agricultural and Environmental Sciences
- Dr. Mark Stetter | Dean, UC Davis School of Veterinary Medicine

9:30 AM – 10:45 AM KEYNOTE ADDRESS

From the Cell to the Street: Addressing Structural Determinants to Advance the Science of Environmental Justice

- Dr. Rachel Morello-Frosch | Professor in the Department of Environmental Science, Policy and Management and the School of Public Health, UC Berkeley

10:50 AM – 11:30 AM FILM PREMIERE

Dignidad: California Domestic Workers' Journey For Justice

Introduction: Senator Maria Elena Durazo, District 24

- Paige Bierma | Director and Editor
- Jennifer Biddle | Producer
- Dr. Irva Hertz-Picciotto | Executive Producer

11:30 AM – 12:30 PM DIGNIDAD: SHINING A LIGHT ON DOMESTIC WORKERS' HEALTH AND SAFETY

Moderator: Dr. Yairamaren Maldonado | Communications & Narrative Change Manager, California Domestic Workers Coalition
Format: Moderated Conversation

- Kimberly Alveranga | Director, California Domestic Workers Coalition
- Jennifer Biddle | Producer
- Paige Bierma | Filmmaker, Director and Editor
- Mirna Arana | Domestic Worker Leader, Mujeres Unidas y Activas
- Dr. Irva Hertz-Picciotto | Director, UC Davis EHSC
- Rock Delgado | Domestic Worker Member, Pilipino Worker Center

12:30 PM – 1:45 PM Lunch & Poster Presentations

1:45 PM - 3:30 PM CLIMATE AND HEALTH EQUITY RESEARCH

Moderator: Dr. Tanya Khemet Taiwo, EHSC Community Engagement Core Co-Director
Format: 15 min presentations | Followed by a shared Q&A & panel discussion

Vulnerable Populations in California's Wildfires

- Dr. Irva Hertz-Picciotto | Director, UC Davis Environmental Health Sciences Center

Pandemics, Endemics, and Drought – When they Intersect

- Dr. George Thompson | Co-Director, Center for Valley Fever | Professor of Medicine, Medical Microbiology and Immunology, UC Davis Health | Pre-talk resources

Developing a Community-Driven Air Monitoring Network in the Age of IoT

- Dr. Nicholas J. Spada | Researcher, UC Davis Air Quality Research Center

Mobile Devices for Personalized Exposure Monitoring

- Mitchell McCartney | Director of Research, UC Davis BioMEMS Lab

3:30 PM – 3:45 PM Break

3:45 PM – 5:15 PM NEW RESEARCH FROM EHSC AWARDEES

Moderator: Dr. Pam Lein | EHSC Career Development Lead | Department Chair, Molecular Biosciences, School of Veterinary Medicine
Format: 15 min presentations and 2 min Q&A | Followed by a 20 min panel conversation

Monitoring the Cosumnes River Watershed after the Caldor Fire: Implications for Ecosystem and Human Health

- Dr. Jasquelin Peña | EHSC Scholar 2022-2023 & Pilot Awardee 2021-2022 | Associate Professor, Civil and Environmental Engineering, UC Davis College of Engineering

Identifying and Addressing Rural and Indigenous Exposures

- Dr. Beth-Rose Middleton | EHSC Pilot Awardee 2022-2023 | Professor, Native American Studies, UC Davis College of Letters & Science

Environmental Impact of Disease-Related Complications of Sickle Cell Disease

- Dr. Shaina Willen | School of Medicine Dean's Fellow in EHS 2022-2023 | Assistant Professor, Clinical Health Sciences, UC Davis School of Medicine

Epigenetics and environmental associations in neurodevelopmental disorders

- Dr. Sanchita Bhatnagar | School of Medicine Dean's Fellow in EHS 2022-2023 | Associate Professor, Medical Microbiology and Immunology, UC Davis School of Medicine

TUESDAY, Oct 4

9:00 AM – 9:15 AM WELCOME REMARKS

- Dr. Lucky Lara | Director, UC Davis Health Comprehensive Cancer Center
- Dr. Kim Barrett | Vice Dean for Research, UC Davis Health
- Dr. Richard Corsi | Dean, UC Davis College of Engineering
- Dr. Claudia Thompson | Branch Chief, Population Health Branch, National Institute of Environmental Health Sciences

9:15 AM – 10:45 AM PERSPECTIVES ON ENVIRONMENTAL JUSTICE

Moderator: Dr. Jonathan London | EHSC Community Engagement Core Co-Director, Associate Professor, Human Ecology, College of Agricultural and Environmental Sciences
Format: Moderated Conversation with Q&A from the audience

- Dr. David Pellow | Dehlsen Chair and Distinguished Professor Environmental Studies | UCSB | Prison Environmental Justice Project
- Lisa Fu | Executive Director, California Healthy Nail Salon Collaborative
- Joe Hostler | Director, Yurok Tribe Environmental Program
- Heather Riden | Program Director, UC Davis Western Center for Agricultural Health & Safety

10:45 AM – 11:00 AM Break

11:00 AM –12:45 PM ENVISIONING SOLUTIONS TO THE CLIMATE AND HEALTH CRISIS
Moderator: Dr. Janine LaSalle | EHSC Deputy Director, Professor, Department of Medical Microbiology and Immunology, School of Medicine Format: 12 min presentations | Followed by a panel discussion **Mitigative and Adaptive Climate and Health Interventions** ● Kathryn Conlon | Assistant Professor, Department of Public Health Sciences, School of Medicine and Department of Medicine & Epidemiology, School of Veterinary Medicine **Climate Action for Health, Equity, and Community Resilience** ● Daniel (Dan) Woo | Team Lead, Climate Change & Health Equity Section, California Department of Public Health **ÓRALE: A Community Collaboration Model for Responding to the Public Health Effects of a Changing Environment** ● Inigo Verduzco Gallo | Program Manager, ÓRALE COVID-19!: Organizaciones para Reducir, Avanzar y Lograr Equidad contra el COVID-19 **Imagining Sustainable, Resilient, and Healthy Affordable Housing in Rural California** ● Dr. Robert Wiener | Continuing Lecturer, Human Ecology, Community and Regional Development, UC Davis; Executive Director, California Coalition for Rural Housing | Pre-Talk Resources **Yes We Can: Toward a Fossil-Free UCD** ● Dr. Steven Wheeler | Professor, Landscape Architecture Program, Department of Human Ecology, UC Davis

12:45 PM – 1:45 PM Lunch and Poster Presentations

See next page for poster presentations

MONDAY Poster Presentations

1	Anthony	Brown	Changes observed in the methylome of airway epithelial cells from rhesus macaques following wildfire smoke exposure
2	Stephanie	Henson	Tet1 Protects the Lungs from DEP-Induced Inflammation
3	Keegan	Malany	Interactions Between Aryl Hydrocarbon Receptor and the Microbiome Regulate Intestinal Macrophages in Non Obese Diabetic Mice
4	Mariana	Parenti	Placental Metabolome in Association with Prenatal Phthalate Exposure and Neurodevelopmental Outcomes in the MARBLES Cohort
5	Osman	Sharifi	snRNA-seq shows the effects of PCB mixtures on gene expression in distinct cell types of the cortex in the Rett syndrome mouse model
6	Chase	Stevens	Episodic ozone exposure induces region- and sex-specific changes in transcriptomic profiles within the developing rat lung
7	Morgan	Domanico	Effects of Developmental 3,3'-Dichlorobiphenyl (PCB 11) Exposure on Lung Maturation
8	Krista	Thongphanh	Effect of E-Cigarette Exposure on Parameters of Distal Lung Injury Using Nonhuman Primate Alveolospheres
9	Bradley	Chew	Data Driven Quality Assurance Quality Control (QA/QC) Measures for Chip-Based Preconcenetrators Scaled for Production
10	Reno	Xu	Epigenetic Effects of PFAS Exposure in Pancreatic Cancer Progression
11	Veneese	Brown	Impact of Ergothioneine Pre-treatment on Naphthalene Toxicity in the Developing and Adult Mouse Lung

TUESDAY Poster Presentations

12	Jessie	Badley	Cellular and Molecular Mechanisms of Lower-Chlorinated PCB Developmental Neurotoxicity
13	Kelly	Chau	A systems biology approach to investigate transcriptional changes in the placenta and fetal brain in a mouse model of polychlorinated biphenyl mixture exposure
14	Eunyoun g	Park	Simple and Rapid Method for 336 Multiresidual Pesticide Analysis in Saliva, and Biomonitoring of Farmers
15	Lauren	Adcock	Quaternary Ammonium Compounds (QACs) cause mitochondrial injury, pulmonary toxicity, and anti-estrogenic effects.
16	Juliann	Jugan	Exposure to DDTs in mice reveals impaired energy expenditure may be mediated by DNA methylation changes
17	Janae	Bonnell	There is no nourishment in a Nuclear feast: A Qualitative Media Analysis of Spokane Tribal Stakeholder Experiences with the Midnite Mine

18	Logan	Williams	Prenatal wildfire smoke exposure associates with comethylated regions of placental DNA methylation and maternal metabolic conditions
19	Rebecca	Wilson	Developmental Exposure to PCB 11 Modulates Critical Neurodevelopmental Endpoints in Juvenile Mice
20	Nicole	McNabb	Examining Multigenerational Impacts on Behavior Resulting from Exposure to the Flame Retardant, BDE-99, in Atlantic Killifish
21	Caitlin	Jones	Constructing exposure risk profiles to describe populations most at-risk to wildfire smoke
22	Julia	Mouat	Assessing multivariate contributors to autism risk in placental methylomes using Comethyl