

# Program Update

Nerissa Wu, MPH, PhD  
California Department of Public Health

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# California Regional Exposure (CARE) Study Updates



CARE Study – Los Angeles County

CARE Study 2 – Riverside, San Bernardino, Imperial, Mono, and Inyo counties

# CARE LA Updates

- 430 participants recruited
- Early notification calls completed
- Analysis for metals and per- and polyfluoroalkyl substances (PFASs) completed for all participants
- Analysis for 1-nitropyrene completed for 160 participants
- Results return scheduled for January 2019



# Results Return Packets

Packet includes:

- Cover letter
- About this study
- Individual results with study and National Health and Nutrition Examination Survey (NHANES) numbers for comparison
- Chemical factsheets

Part 1: Metals CARE Study Participant Axxxxx

## Your lab result for Mercury in Blood

Mercury is a metal that is found in nature. It is released into the environment when coal is burned, by some industries, and from past use in gold mines. Mercury builds up in certain types of fish.

Your blood mercury result	Lowest result found in this study	Highest result found in this study	Number of participants in this study with mercury found in their blood	Middle level in the U.S.	95th percentile in the U.S.	Level of concern*
3.5	0.34	21.5	421 of 430	0.74	4.7	5.8 and above if you are pregnant or might become pregnant 10 and above for all other adults

Results for mercury in blood are reported in micrograms per liter (µg/L).

### Did you find mercury in my blood?

Yes. You

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### Frequently Asked Questions about Mercury

**Where is mercury found?**

- Certain types of fish and seafood. This is the most common source of exposure to mercury.
- Some imported face creams used for skin lightening, anti-aging, or acne.
- Some herbal medicines and other traditional remedies, especially from China and India.
- Silver-colored dental fillings.
- Glass thermometers, older barometers, and blood pressure gauges.
- Fluorescent lights, including compact fluorescent light (CFL) bulbs.

**What are possible health concerns?**

Mercury:

- Can affect brain development and cause learning and behavior problems in infants and children who were exposed in the womb.
- Can harm the nervous system and kidneys.
- May affect the heart.
- May increase cancer risk.

**What are possible ways to reduce exposure?**

- Choose fish that are lower in mercury, such as salmon, tilapia, trout, canned light tuna, sardines, anchovies, and oysters.
- Avoid fish that are high in mercury, such as shark, swordfish, orange roughy, bluefin and bigeye tuna, tilefish, king mackerel, and marlin.
- Do not use imported face creams for skin lightening, anti-aging, or acne unless you are certain that they do not contain mercury.
- Properly recycle CFL bulbs (see below).
- Properly clean up broken thermometers, CFL bulbs, and other items containing mercury (see below). Do not let children play with silver liquid from items like mercury thermometers.

**For more information:**

- Information on mercury for people who catch and eat fish: [www.oehha.ca.gov/fish/mercury-fish-information-people-who-eat-fish](http://www.oehha.ca.gov/fish/mercury-fish-information-people-who-eat-fish); or call OEHHA at (916) 324-7572
- Guide for choosing fish that are lower in mercury: [www.oehha.ca.gov/media/downloads/fish/fact-sheet/2011commfishguidecolor.pdf](http://www.oehha.ca.gov/media/downloads/fish/fact-sheet/2011commfishguidecolor.pdf)
- Concerns about mercury exposure - contact the California Poison Control System hotline: [www.calpoison.org/home.html](http://www.calpoison.org/home.html) or 1-800-222-1222
- Fact sheet on mercury in your environment, with information on cleaning up mercury spills: [www.epa.gov/mercury](http://www.epa.gov/mercury)
- For CFL recycling locations: visit [www.recyclenation.com](http://www.recyclenation.com) and enter "Compact Fluorescent Lights" and your zip code in the search box; or call 1-800-RECYCLING (1-800-732-9254)

Part 1: Metals CARE Study Participant Axxxxx

# CALIFORNIA REGIONAL EXPOSURE STUDY

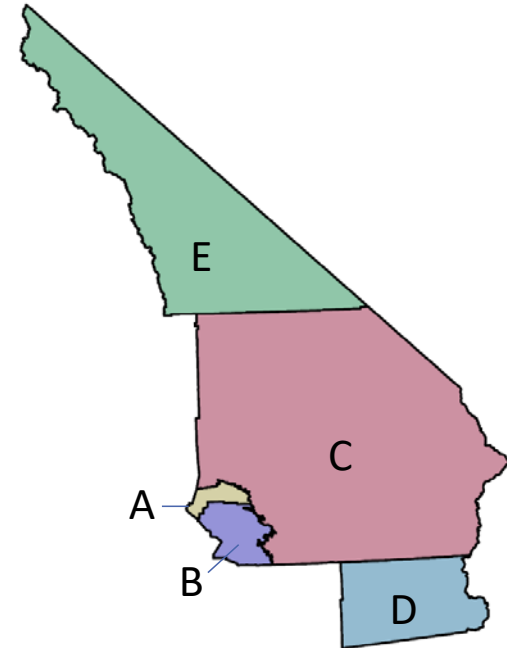


# Region 2: Population

County	Population	Non-Hispanic White	Hispanic	English as Primary Language at Home
Riverside	2.3 mil	36%	48%	64%
San Bernardino	2.1 mil	29%	53%	63%
Imperial	180,000	11%	84%	27%
Mono	18,144	66%	28%	78%
Inyo	18,026	63%	22%	87%

# Region 2: Zones and Sampling Goals

Zone	Zone Description	Number of Participants
A	Riverside County urban	104
B	San Bernardino County urban	118
C	Riverside and San Bernardino counties suburban and rural areas	78
D	Imperial County	30
E	Inyo and Mono counties	20
<b>Total Sampling Goal in Region 2:</b>		<b>350</b>



# CALIFORNIA REGIONAL EXPOSURE (CARE) STUDY

## ESTUDIO DE EXPOSICIÓN REGIONAL EN CALIFORNIA

**What is the CARE Study?** The CARE Study is measuring chemicals in people across the state. This information will support efforts to reduce chemical exposures for Californians and improve public health. Biomonitoring California is currently looking for 350 people from Riverside, San Bernardino, Imperial, Inyo and Mono counties to join the study.

**Who can participate?** You must be 18 years of age or older, and be able and willing to give a small blood and urine sample.

**How will the CARE Study benefit me?** You will receive your results, information on how to reduce your contact with chemicals, and a **\$50 gift card**.

**How do I get started?** Visit [www.cdph.ca.gov/CARE](http://www.cdph.ca.gov/CARE) or call us at **510-367-4166** to find out more.

*The CARE Study is a project of Biomonitoring California, a collaboration of the California Department of Public Health and the California Environmental Protection Agency.*

**¿Qué es el estudio CARE?** El estudio CARE está midiendo los niveles de sustancias químicas en personas en todo el estado. Esta información apoyará los esfuerzos para reducir la exposición a sustancias químicas de la californianos y mejorar la salud pública. Biomonitoring California está buscando 350 personas de los condados de Riverside, San Bernardino, Imperial, Inyo y Mono para unirse al estudio.

**¿Quién puede participar?** Debe tener 18 años de edad o más, y poder realizar una encuesta, y dar una pequeña muestra de sangre y orina.

**¿Cómo me beneficia?** Los participantes recibirán sus resultados, orientación sobre cómo reducir los sustancias químicas y una **tarjeta de regalo de \$50**.

**¿Cómo empiezo?** Visite [www.cdph.ca.gov/CARE](http://www.cdph.ca.gov/CARE) o llámenos al **510-367-4166** para obtener más información.

*El Estudio CARE es un proyecto de Biomonitoring California, una colaboración del Departamento de Salud Pública de California y la Agencia de Protección Ambiental de California.*



[www.cdph.ca.gov/CARE](http://www.cdph.ca.gov/CARE) • 510-367-4166 • [CAREStudy@cdph.ca.gov](mailto:CAREStudy@cdph.ca.gov)



# Projected Timeline for 2019

CARE Activities	CARE LA	CARE 2
Outreach		Through January
Results return	January	
Field work		January – May
Results return for phenols	March	
Community meetings	April – May	

# Foam Replacement Environmental Exposure Study (FREES)

- Objective: to compare levels of polybrominated diphenyl ethers (PBDEs) and organophosphorus flame retardants (OPFRs) before and after foam furniture replacement
- Samples collected at baseline and at 6, 12, and 18 months after furniture replacement
- UC Davis Couch and Foam Cushioning Replacement Study (CFCRS) collected household dust following a similar timeline



# FREES Update

- Sample collection completed April 2018
- Some loss to follow up with each time period
- All biomonitoring results returned October 2018
- All dust and foam analysis are complete



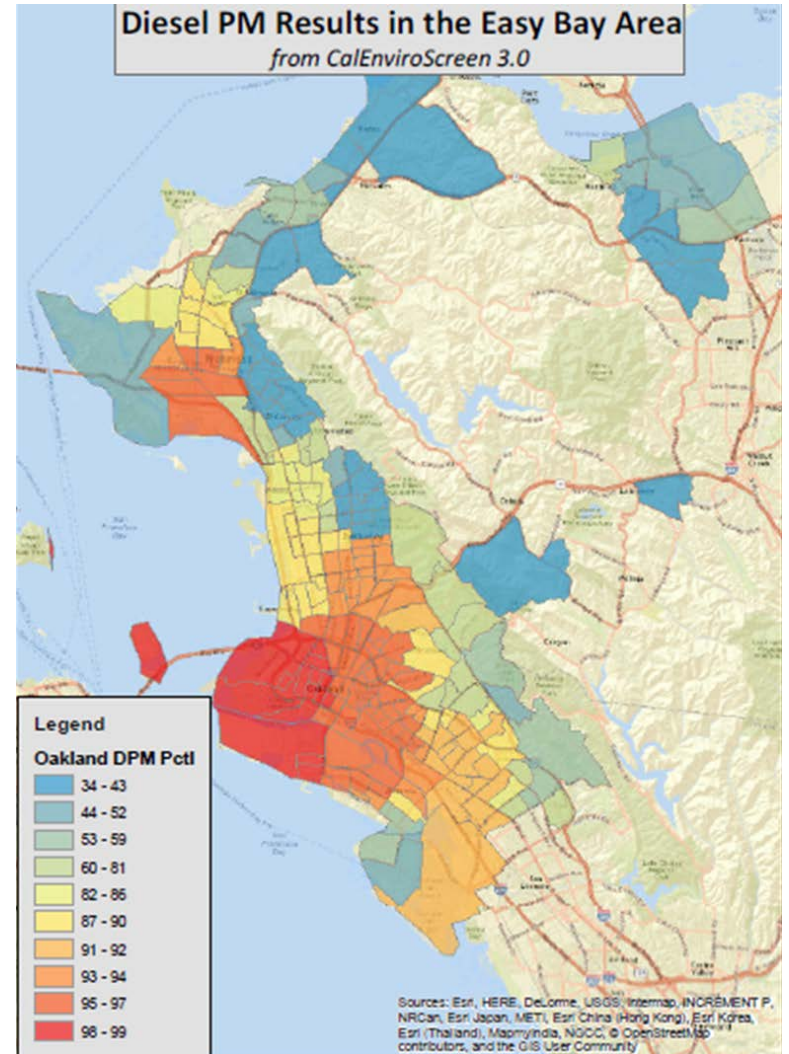
# East Bay Diesel Exposure Project (EBDEP) Major Goals

- Directly assess exposures to diesel exhaust in child-parent pairs living in the San Francisco East Bay
- Compare levels of diesel biomarkers:
  - Within households, across age groups
  - Across communities
  - Over time

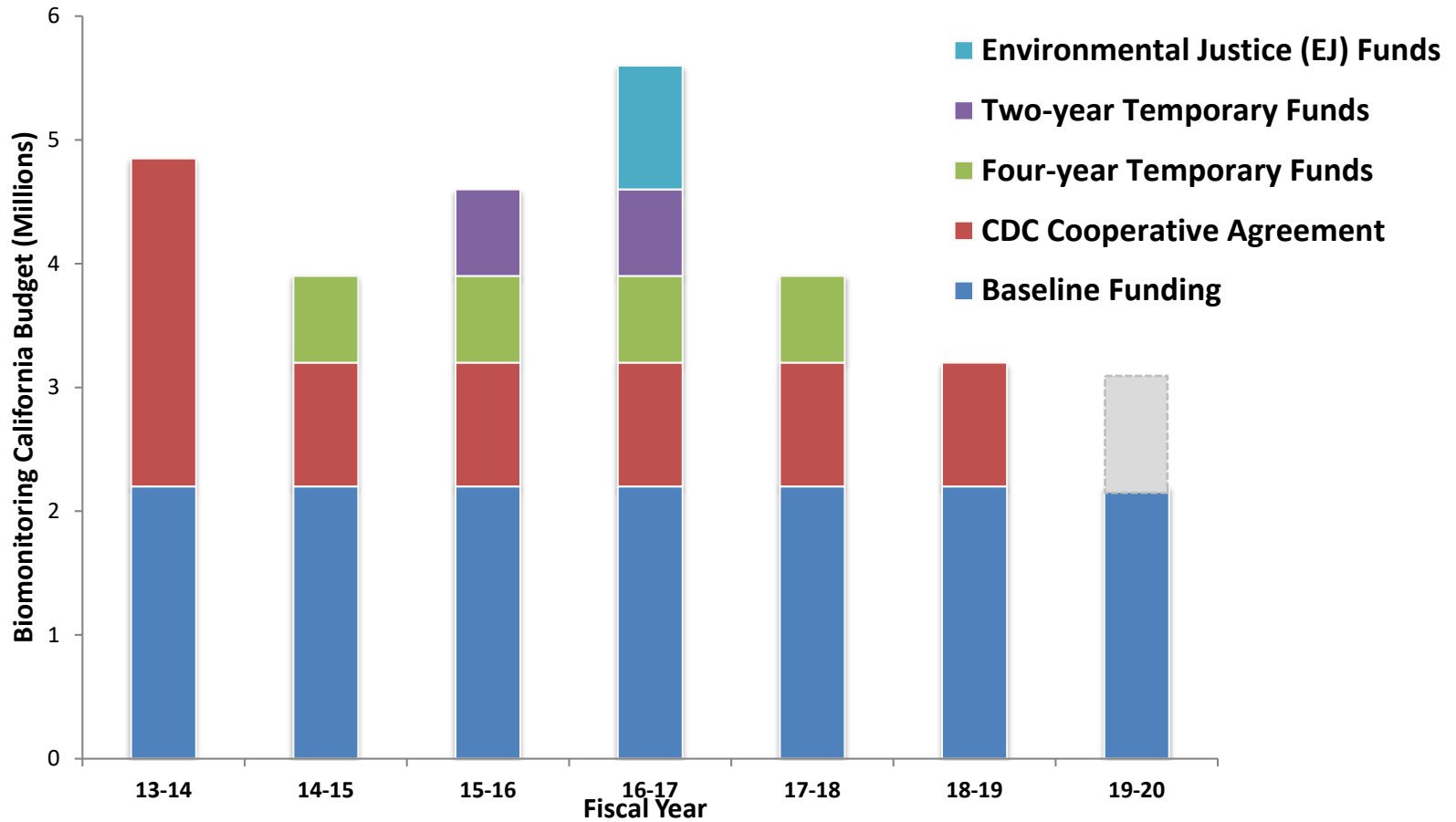


# EBDEP Updates and Status

- Broader coverage of East Bay: Hercules to San Leandro, with focus on Richmond and Oakland
- Total number of participants reduced to 45 child-parent pairs; “daily samplers” increased to 15
- Recruitment and sampling ongoing, ending in early December 2018
- Results return and community events in 2019

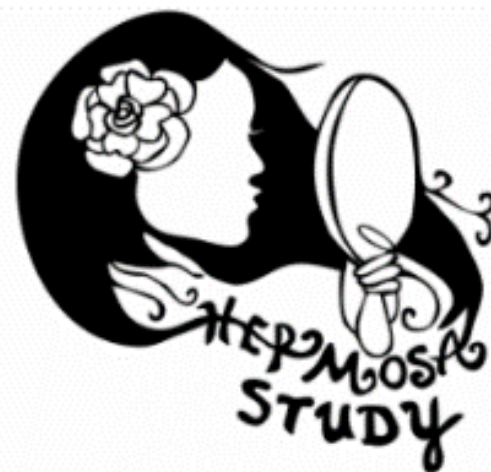


# Program Budget



# Program Priorities

- Internal process has identified program priorities
  - Statewide surveillance
  - Environmental justice
  - Consumer products





# Environmental Justice Listening Sessions

- Funded by stakeholder bill for FY 2016-17
- Completed 48 interviews of across the state
- Identified priority issues



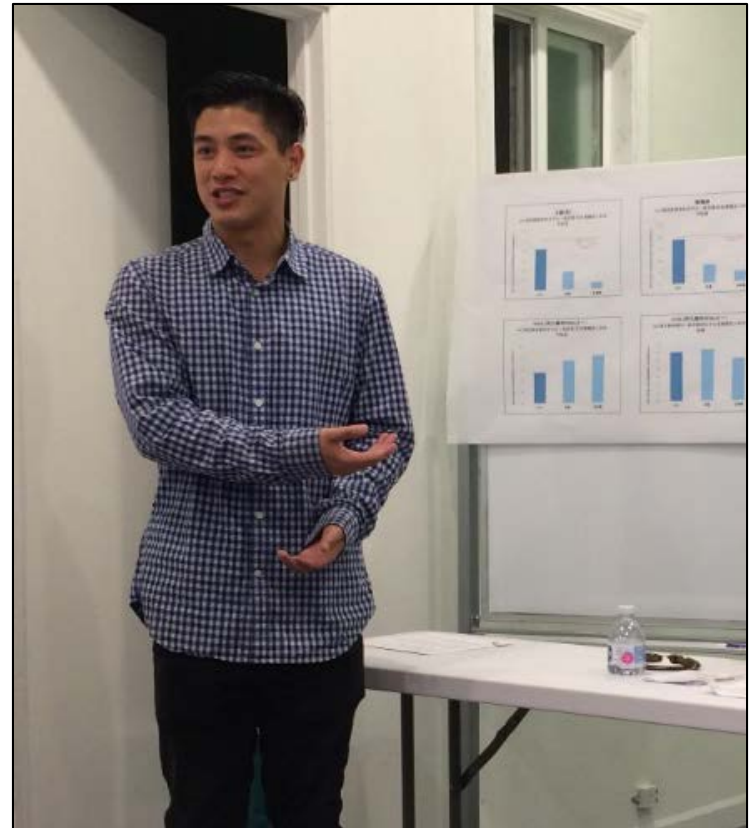


# Founding Legislation: SB 1379

- ... shall utilize biological specimens ... to identify designated chemicals that are present in the bodies of Californians
- Shall utilize scientifically based statewide surveys
- Additional community-based surveys shall be contingent on funding
- Communicate findings to participants, communities, and the general public
- Serve as a guide for other biomonitoring programs supported by state funds
- Conduct statistical and epidemiological analyses of biomonitoring results

# How does Biomonitoring California serve public health?

- Provide baseline for comparison for community studies
- Provide expertise in study design questionnaire development
- Laboratory expertise
- Results communication and interpretation



# Biomonitoring California Goals

- Fulfill original vision of statewide surveillance
  - Shorter sampling cycle
  - Expanded chemical analyses
  - Inclusion of sub-studies such as:
    - consumer product interventions
    - multiple samples per participant
- Expansion of stable funding so that laboratory methods can be maintained and available
- Support for non-targeted screening
- Capacity to respond to community requests and emergency events
- More timely analysis of collected data

# Biomonitoring California Staff

Kathleen Attfield

Sabrina Crispo Smith

Lissah Johnson

Jianwen She

Judy Balmin

Adam D'Amico

Duyen Kauffman

Dan Sultana

Lauren Baehner

Josephine DeGuzman

Juliet Kinyua

Juan VillaRomero

Hyoung Gee Baek

Jeff Fowles

Weixin Kuang

Jed Waldman

Russ Bartlett

Ryszard Gajek

Ying Li

Miaomiao Wang

Paramjit Behniwal

Qi Gavin

Jennifer Mann

Yunzhu Wang

Reber Brown

Songmei Gao

June-Soo Park

Suzanne Wittwer

Tiffany Chan

Sara Hoover

Julian Perez

Nerissa Wu

Key-Young Choe

Shoba Iyer

Myrto Petreas

Greg Yeh

Robin Christensen

Ting Jiang

Martha Sandy

Jun Qiang Zhou