



Program Update

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Biomonitoring California
Scientific Guidance Panel Meeting
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Program updates

- **Personnel Announcements**
- **Ongoing Studies Update**
- **New: Foam Replacement and Environmental Exposure Study (FREES)**

Personnel Announcements

- **Welcome two new visiting scholars (EHL)**
 - **Su Zhang (Shanghai Food and Drug Control)**
 - **Heng Wang (Zhoushan CDC)**

Project Updates

- **Pilot BEST**

- On-going data analyses for all analytes
- Evaluation of results return complete

- **Expanded BEST**

- Lab results for 2nd set of chemicals returned in August
- Data analyses in progress for selected analytes
- Following up with participants with elevated arsenic

- **MAMAS**

- Additional samples have been received from three of the four regions and analyses will continue in 2016



Biomonitoring California Priority Initiatives

- **Statewide representative sampling**
- **Studies of targeted populations – e.g., workers, pregnant women, children?**
- **Biomonitoring intervention studies**
- **Consumer product chemical exposures**
- **Environmental justice context**

Biomonitoring California Priority Initiatives (2)

- Statewide representative sampling
- Studies of targeted populations – e.g., workers, pregnant women, children?
- Biomonitoring intervention studies
- **Consumer product chemical exposures**
- Environmental justice context

Foam Replacement and Environmental Exposure Study (FREES)

- *Is there a benefit to replacing foam furniture?*

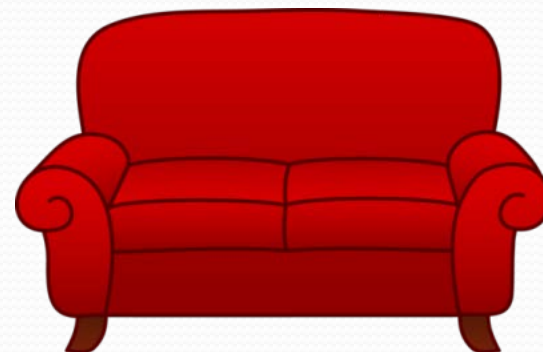
FREES is a study to evaluate the effect of removing or replacing foam on biomonitored levels of flame retardants (FRs)

- ***Partners:* UC Davis, Green Science Policy Institute, Environmental Working Group, Silent Spring**



FREES Study Goals

- **Assess changes in levels of FRs**
- **Assess pathways of exposure**
- **Assess effectiveness of furniture replacement as exposure reduction strategy**



FREEES: Analysis Plan

- **UC Davis is modeling changes of chemicals in household dust**
- **Biomonitoring CA is measuring:**
 - **PBDEs in serum**
 - **Organophosphate flame retardant (OPFR) metabolites in urine**
 - **PBDEs and OPFRs in hand wipes**

FREES: Sample Collection Plan

Month of Sampling						
	0	Couch/Foam Replacement	6	12	18	
Dust (UCD)	X			X	X	X
Serum	X				X	
Urine	X			X	X	X
Hand Wipe	X				X	
Exposure Questionnaire	X			X	X	X

FREES: Progress & Next Steps

- **Phase 1**

- **Convenience sample of San Francisco and East Bay residents knowledgeable about chemical pollutants**
- **Baseline biomonitoring ~ 2/3 complete**
- **Next sample collection in June 2016**

- **Phase 2**

- **Proposed partnership with First Community Housing in San Jose**
- **Recruitment planned for January 2016**
- **FREES total: 20-30 households, 30-50 participants**

Biomonitoring Team

Jeffrey Aduviso	Laura Fenster	Gail Krowech	Jed Waldman
Josephine Alvaran	Jeff Fowles	Ying Li	Heng Wang
Hyoung Gee Baek	Ryszard Gajek	June-Soo Park	Miaomiao Wang
Paramjit Behniwal	Qi Gavin	Emily Parry	Yunzhu Wang
Reber Brown	Tan Guo	Myrto Petreas	Berna Watson
Yu-Chen Chang	Weihong Guo	Sissy Petropoulou	Nerissa Wu
Key-Young Choe	Suhash Harwani	Laurel Plummer	Greg Yeh
Oscar Chung	Arthur Holden	Martha Sandy	Rana Zahedi
Robin Christensen	Sara Hoover	Jianwen She	Su Zhang
Sabrina Crispo-Smith	Erika Houtz	Martin Snider	Jun Qiang Zhou
Dina Dobraca	Lauren Joe	Dan Sultana	Wei Zou
Amy Dunn	Duyen Kauffman	Robert Voss	