

# DTSC Laboratory Update



**Myrto Petreas, PhD, MPH**  
**Environmental Chemistry**  
**Laboratory DTSC**

**Report to Scientific Guidance Panel**  
**Sacramento**  
**February 9, 2010**

# Best Case Lab Capacity with Base \$ - CECBP in DTSC Lab

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Able to do **ONE** of the following...

Tests (in Serum)	When?	No./Yr.
POPs (PBDES, some new BFRs)	Dec 09	800 <sup>640</sup>
<b>OR</b>		
Perfluorinated chemicals	Dec 09	1000 <sup>800</sup>

**20% Reduction in numbers due to furloughs**

# Status of Method Validation

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## □ **PBDEs**

- **Transitioned to CDC methodology (HRMS)**
- **Validation underway for automation modules**
- **Continue sample analysis**

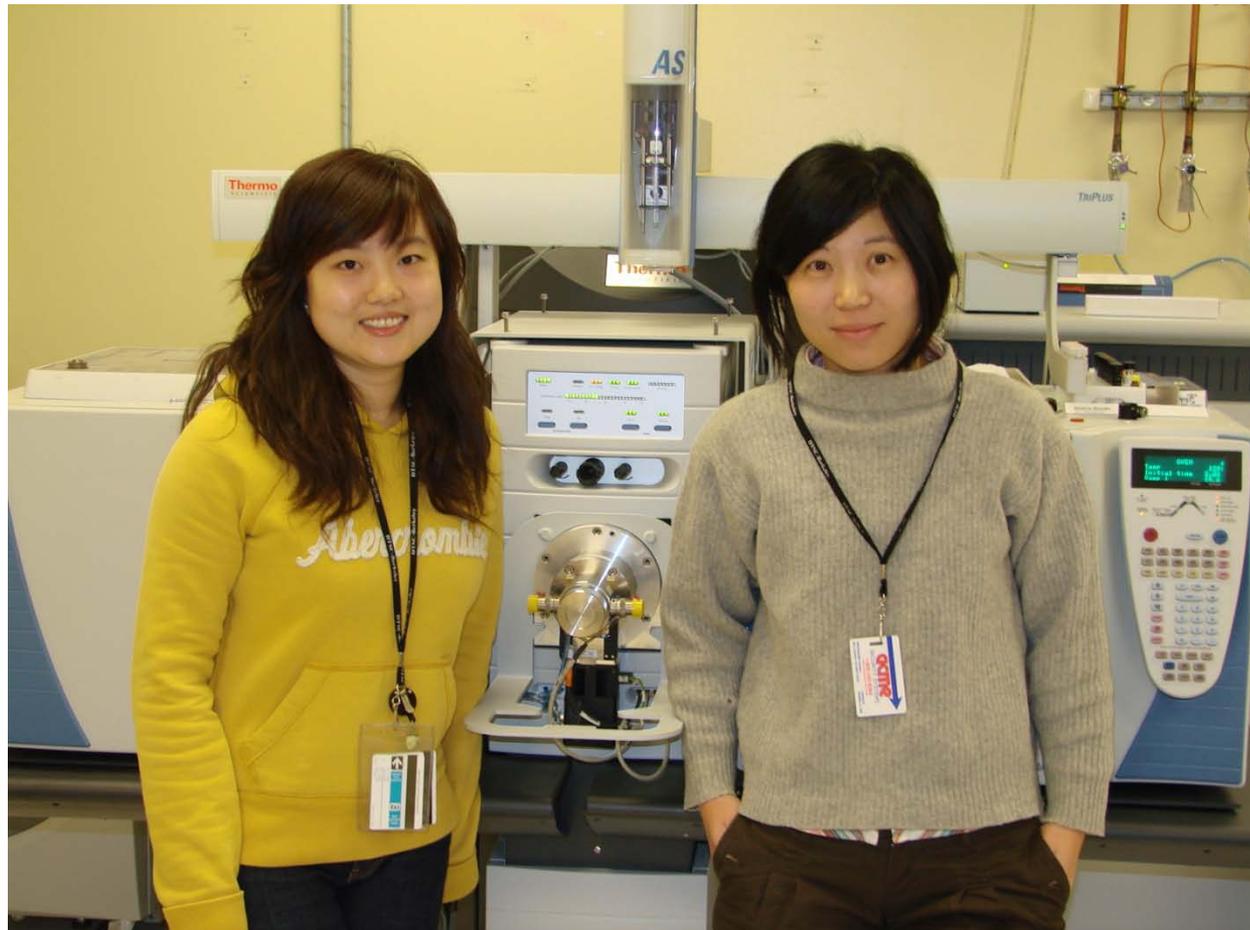
## □ **PFCs**

- **Adapted CDC methodology**
- **Internal validation criteria met**
- **Undergoing CDC test**
- **Standard Operating Procedure in review**

# DTSC CECBP Staff

Yunzhu Wang and Miaomiao Wang, Ph.D.

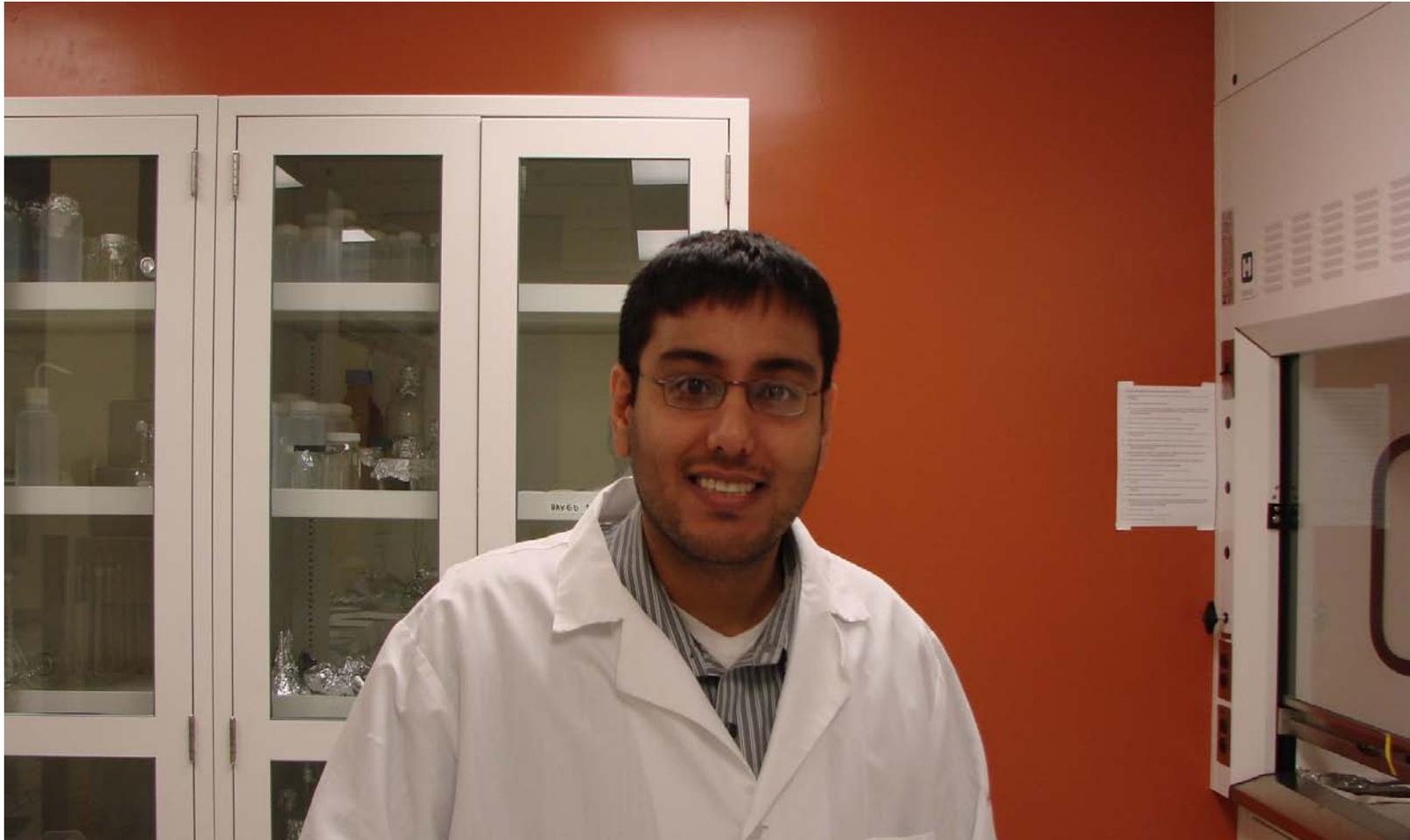
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# APHL Fellow

## Suhash Harwani, Ph.D.

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# Current DTSC Work with Serum: Indirect Benefits to CECBP

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- **On-going studies on persistent organic pollutants in human serum**
  - **OCPs, PCBs, PBDEs, Hydroxy-PCBs, Hydroxy-PBDEs, Triclosan, Phenols**
  - **PBDEs, PFCs in pregnant women (UCSF pilot)**

# Current DTSC Work on Environmental Assessments

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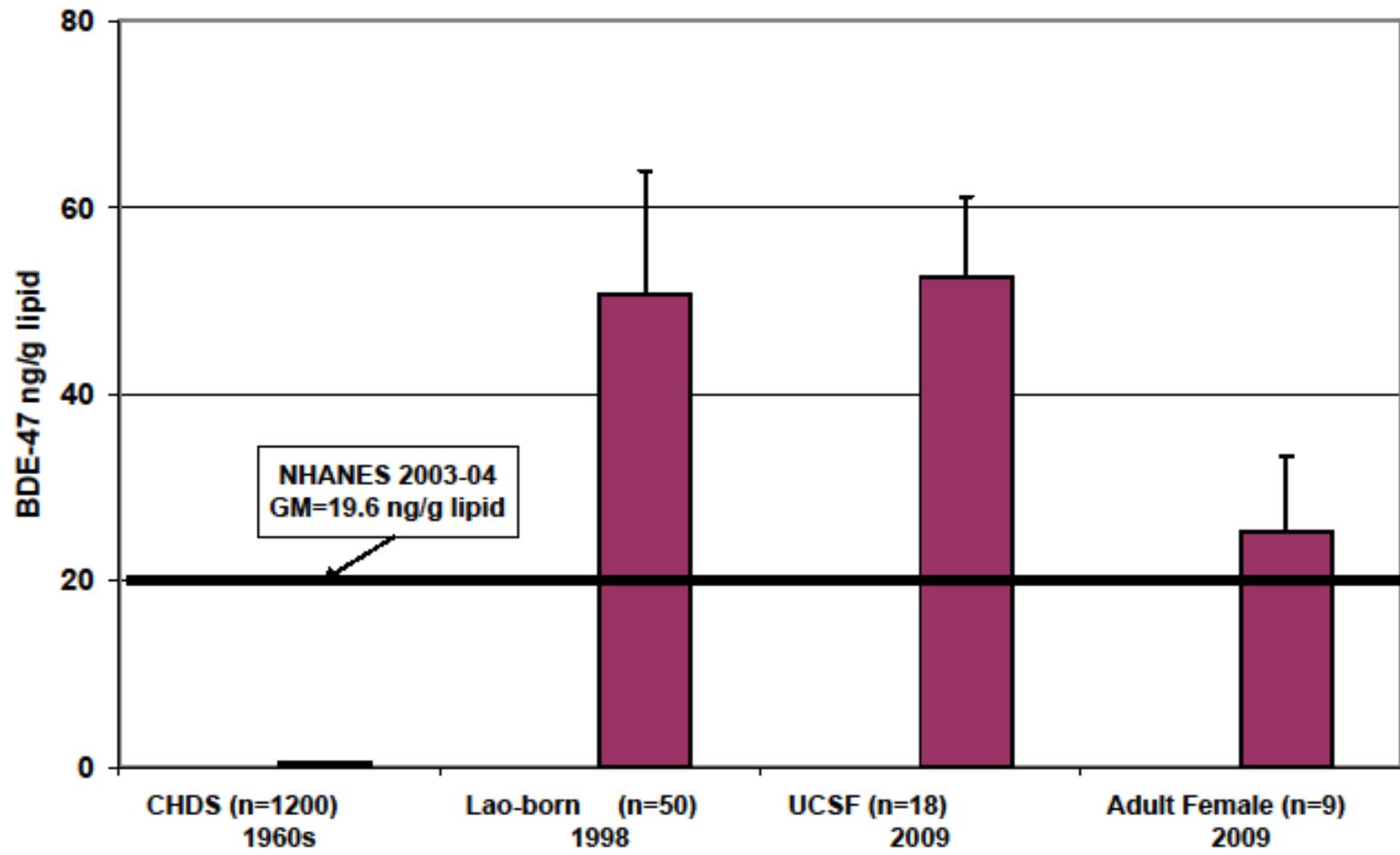
- **Methodologies for:**
  - **Household Dust study (PBDEs, PCBs, PFCs, BFRs)**
  - **Cat study (PBDEs, PFCs, BFRs)**
  - **Plastic debris in the Ocean**

# UCSF Pilot results

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- **N=18 (2 batches) pregnant women**
- **PBDEs**
  
- **Preliminary results:**
  - **Mean BDE-47 = 52 ng/g lipid**
  - **NHANES GM= 19.6 ng/g lipid**

**Fig 2. BDE 47 in Serum of California Women**



**Fig 2. BDE 47 in Serum of California Women**

CA-NHANES data from Zota et al, 2008

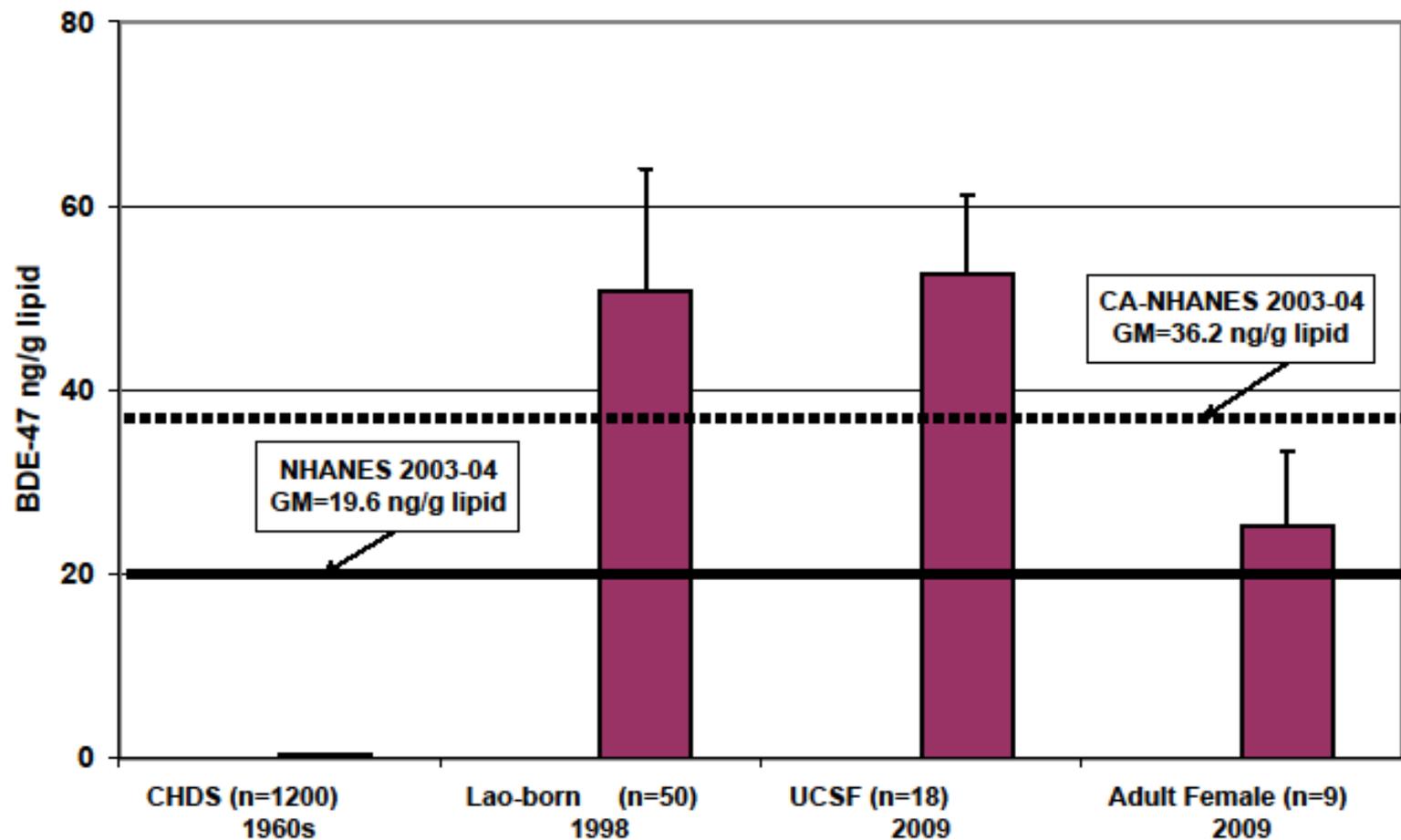
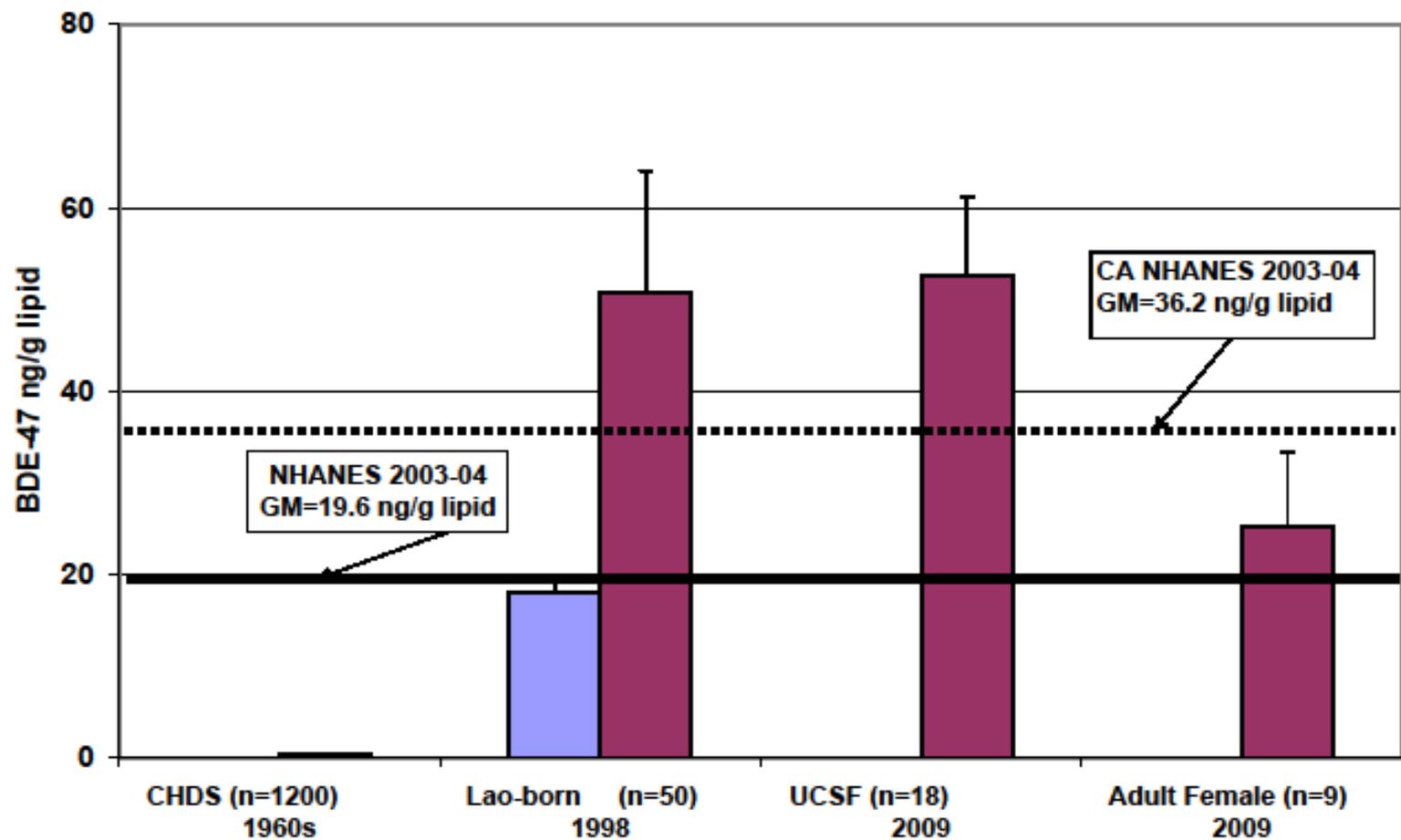
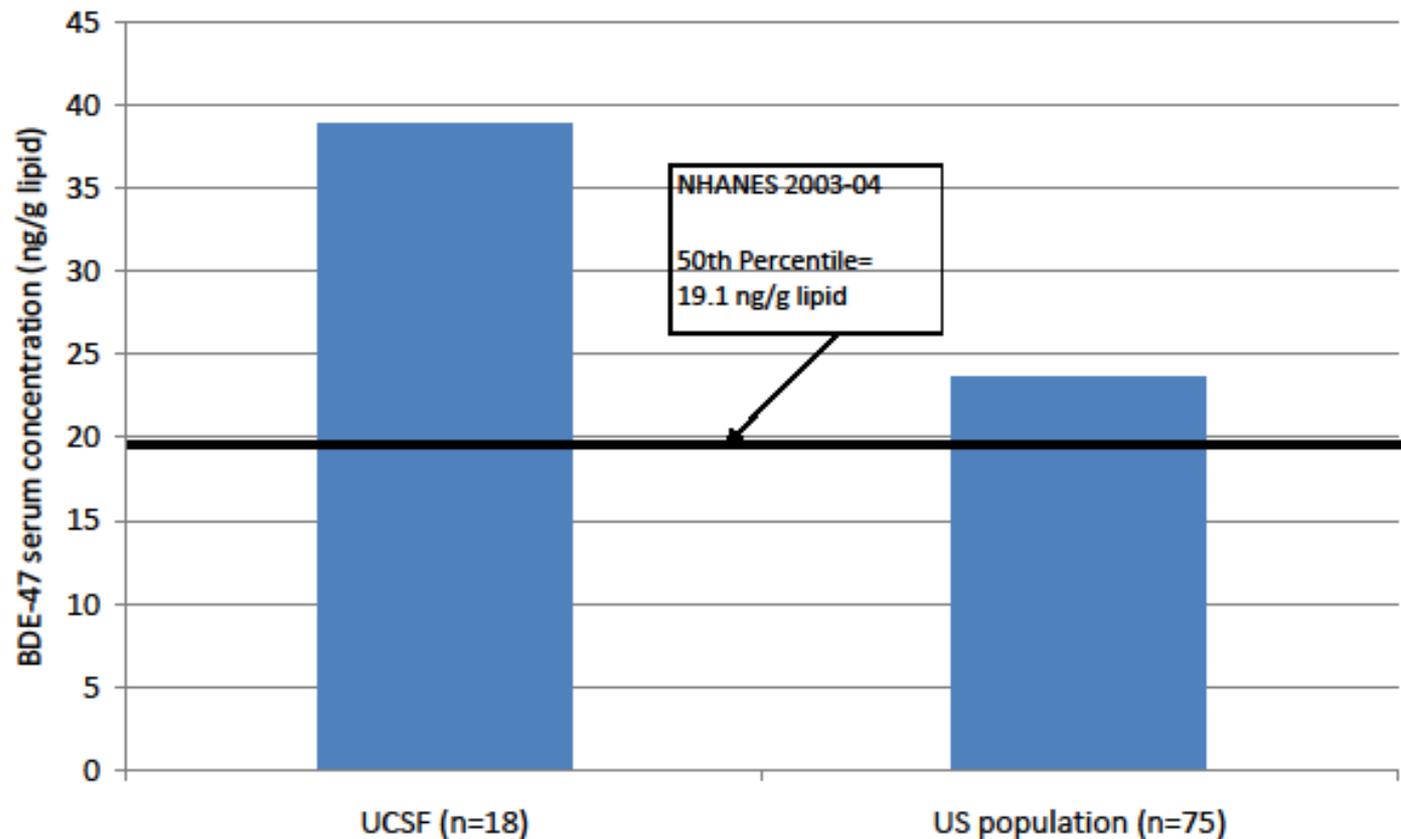


Fig 2. BDE 47 in Serum of California Women



### Median BDE-47 levels in pregnant women: California vs. US



\* US population data is from NHANES 2003-2004; Zota and Woodruff, (unpublished) work in progress

# Soon to come....

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- **PFCs in contemporary and archived serum**
- **Method development for new brominated flame retardants**
- **PBDEs, BFRs in Flight Attendants**
- **Serum PBDEs in contemporary CA men (RFI)**

# ECL Seminars

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- **Wednesday, February 10, 2010 @ 2:00 p.m**
  - Derek Muir, Ph.D., Environment Canada  
"Identifying the Next Generation of Persistent and Bioaccumulative Chemicals"
- **Thursday, February 11, 2010 @ 2:00 p.m.**
  - Carin A. Huset, Ph.D., Minnesota Department of Health  
"Biomonitoring of Perfluorochemicals in Communities with Contaminated Drinking Water in St. Paul, MN"