

# Laboratory Activities

Peter Flessel, PhD  
California Department of Public Health

Myrto Petreas, PhD, MPH  
Cal/EPA Department of Toxic Substances Control

California Environmental Contaminant Biomonitoring Program  
Scientific Guidance Panel Meeting

October 24, 2008  
Oakland and Irvine, California

# Two State Labs with Different Testing Functions

- **CDPH Lab focus on metals and non-persistent organics**
  - **Test mostly chemicals in urine**
  - **Test some metals in blood**
  - **Process and archive samples**
- **DTSC Lab focus on persistent organics**
  - **Test mostly chemicals in blood/serum**

# Recent Progress

- Staff: Hired 5 in CDPH, 2 in DTSC
- Lab remodel to accommodate new equipment : Almost done



# Recent Progress

- Equipment: Completed purchases, deliveries soon, training in winter
- Lab MOU with CDC signed (Copy in SGP packet)



# MOU: CDC Lab Support for CECBP

- **CDC to provide lab training**
  - **Using CDC's analytical methods**
  - **In sample collection, processing and shipping**
- **CDC will analyze CA Samples**
  - **Provide QC samples and standards**
  - **Support community study n=500**
  - **Support one-chemical study n=200**
  - **Assist exposure-incident response**

# Lab Challenges Remain

- No operating funds (for chemicals, standards, solvents, glassware etc.) in CDPH lab budget
- DTSC lab staff (2) below critical mass, difficult to sustain and fuel further progress



# Next Steps

- Set up new equipment, training
- Develop, validate methods with QA/QC
- Send CA staff to train at CDC
- Make plans to manage samples and increase throughput

# Collaboration with Health Tracking Study

- CA Tracking Program conducting pesticide drift study in Tulare County
- Collaboration with local Health Officer and community clinics
- Results may be useful in evaluating buffer zones around fields sprayed with pesticides
- Test collection & transportation of urine from field to Richmond lab
- Analyze n=30 for chlorpyrifos in 2009



# Testing Contemporary Samples

- Collaboration with Health Tracking study
- Pilot study to test lab components
  - To be discussed at Dec SGP meeting
- Collaborations to analyze archived contemporary CA samples (Copy of Request for Information (RFI) in packet and on website)

# Request for Information – Goals

- Use archived, recent CA specimens
- Pilot the use of the new lab equipment
- Assess the ranges of concentrations in Californians of some chemicals that may be biomonitored by the CECBP on a larger scale
- Add value to ongoing epidemiological or exposure assessment studies

# RFI- Selection Criteria

- Chemicals compatible with labs' capabilities
- Samples (type, collection and storage) compatible with CECBP plans
- Population
  - Basic demographics shared with CECBP
  - Sufficient size for useful body burden information
  - Recent CA specimens, preferably from higher-risk for exposure (e.g. children or pregnant women)
- Funding
- Data ownership, co-authorship

# RFI- Timeline

- **September 4, 2008 – Request for Information and Project Description Forms distributed**
- **November 1, 2008 – Deadline for submitting Project Description Forms**
- **January 2009 – Researchers selected for collaboration are notified**
- **February 2009 – Materials Transfer Agreement(s) to be negotiated and executed**
- **March 2009 – Samples to be received by the CECBP laboratories**
- **April 2010 – Laboratory reports produced and returned to researchers**

# Summary

- Initial hiring completed
- Progress in renovating labs, buying equipment.
- Barriers to progress remain- CDPH lab lacks operating funds, DTSC lacks staff.
- With current resources we can only do **small** collaborative studies to test **limited** set of chemicals in **small** number of participants (Health Tracking; RFI; Pilot)
- Need additional funds to expand number of chemicals and participants per SB1379