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 nonpersistent 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: Hired5 in CDPH,2 in DTSC
- Lab
 remodel to
 accommoda
 te 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