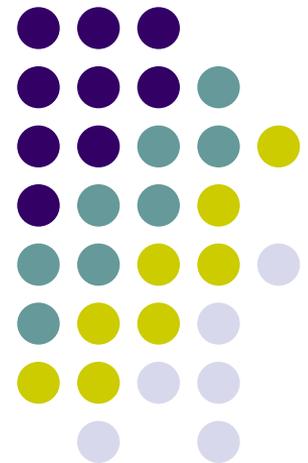


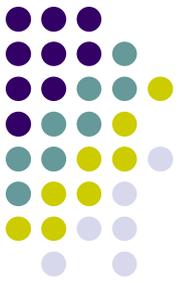
# Update on CECBP Activities

Rupali Das, MD, MPH  
California Department of Public Health

California Environmental Contaminant  
Biomonitoring Program (CECBP)  
Scientific Guidance Panel Meeting

February 9, 2010  
Sacramento, California





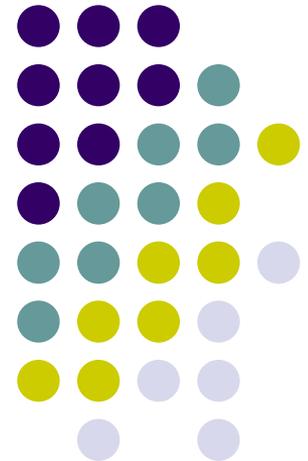
# Overview

- CECBP's public name
- Staff changes
- Program goals
- State funding status
- CDC cooperative agreement
- Progress toward CDC cooperative agreement objectives



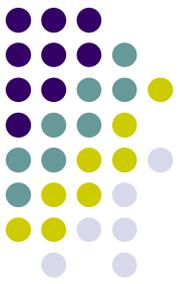
# Biomonitoring California

California Environmental  
Contaminant Biomonitoring  
Program





# Newly Hired Staff: CDC Cooperative Agreement



- Shirley Cao, Quality Management Coordinator
- Yangzhu Long, Specimen Management Specialist
- Indranil Sen, Environmental Laboratory Scientist
- Josephine Alvaran, Laboratory Scientist
- *To be hired: Laboratory Information Management System Specialist; two additional Environmental Laboratory Scientists*



# State Staff Changes

- Research Scientist II (CDPH)
- Kristin Gottschalk, Research Scientist I (OEHHA)

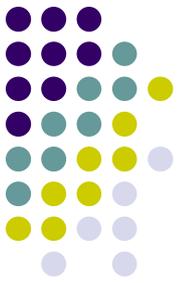


# Biomonitoring California Goals

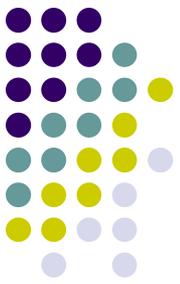
- Program goals:
  - Determine levels of environmental chemicals in a representative sample of Californians;
  - Establish trends in the levels of these chemicals over time;
  - Assess effectiveness of public health efforts and regulatory programs to reduce Californians' exposures to chemicals.
- The Program is committed to providing opportunities for meaningful public participation through activities and materials that are understandable and sensitive to the diverse needs of Californians.



# State Funding Status



- Base level funding (\$1.9 million) for 3 departments
- Toxic Substances Control Account (TSCA)
  - Funding maintained for 2009—2010
  - Funding anticipated to be maintained for 2010—2011
- State funded positions: 13 full-time equivalent (FTE)
- In-kind contributions
  - State staff ~4 FTE
  - Fellows:
    - Association of Public Health Laboratories
    - Council of State and Territorial Epidemiologists
    - CDC Public Health Prevention Specialist
- Workload adjustments: mandatory furloughs, due to end June 2010

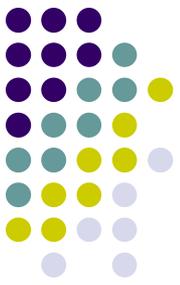


# CDC Cooperative Agreement

- 5-year cooperative agreement
- \$2.6 million to CA for first year
- September 1, 2009 start date
- Continuing application due Spring 2010
- Mark Davis, CDC Program Officer



# CDC Cooperative Agreement: Objectives



- 1) Expand laboratory capability and capacity
- 2) Demonstrate success of laboratory quality management system
- 3) Apply biomonitoring methods to assess and track exposure trends
- 4) Assess exposures in a representative group of Californians
- 5) Collaborate with stakeholders, communities

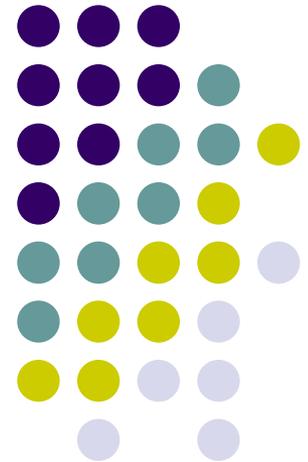


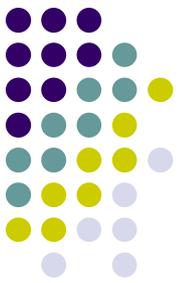
# Objectives 1 & 2

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Expand laboratory capability and capacity

Demonstrate success of laboratory quality management system





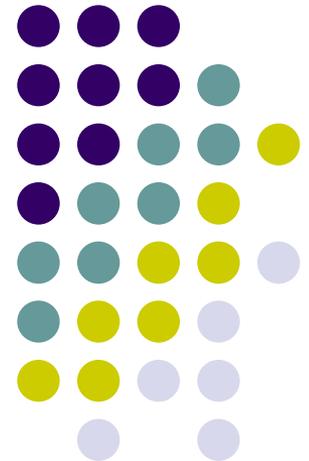
# Laboratory method development

- Currently developing methods for
  - Pesticides (chlorpyrifos, pyrethroids)
  - Bisphenol A
  - Phthalates
  - Polycyclic Aromatic Hydrocarbons (PAHs)
  - Metals
  - Perfluorinated chemicals (PFCs)
  - Flame retardants
- Biomarkers for diesel exposure
  - Discussed at SGP meeting October 2009
  - Identifying appropriate biomarker poses challenge
  - Will be addressed at future meeting



# Objective 3

Apply biomonitoring methods to  
assess and track exposure  
trends





# Assess and track exposure trends

## 1. Environmental Health Tracking



- Tulare - Organophosphate pesticides
  - Chlorpyrifos, results not yet available
  - Will return in Summer 2010
- Imperial - Perchlorate and metals
  - Collected urine, food, and water samples
  - Lab analysis on perchlorate, thiocyanate, nitrate, and iodine in urine
  - Analyzed perchlorate in food and water samples
- Additional collaborations to be defined



# Assess and track exposure trends

## 2. CYGNET



Cohort of Young Girls' Nutrition, Environment, and Transitions

- Environmental, genetic, other factors during onset of female puberty as breast cancer risks
- Baseline blood and urine collected in 2005
  - > 400 girls (6-8 yrs) in SF Bay Area
- Whole blood and urine samples from baseline cohort
  - ~ 350 available now
  - Subsequent urine samples available over time
- Current analytes of interest – metals in blood
- Memorandum of Understanding completed



# Assess and track exposure trends

## 3. Maternal and Infant Environmental Exposure Project (MIEEP)

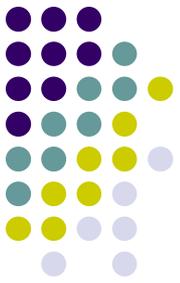


- Measure and compare levels of chemicals in pregnant women and newborn infants
  - Recruit pregnant women at San Francisco General Hospital
  - Collect biological samples:
    - Blood and urine from ~100 pregnant women
    - Newborn umbilical cord blood samples
  - Analyze selected chemicals at Biomonitoring California labs



# Assess and track exposure trends

## 4. Firefighter Exposures



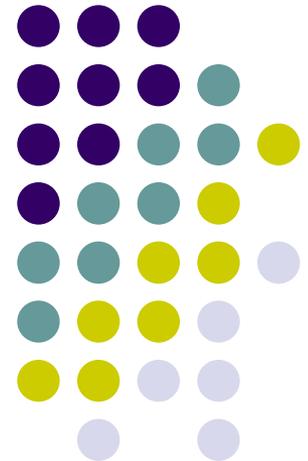
- Exploring collaboration with Contra Costa County
  - Fire department physician, Unions, Management
- Pilot study of 50 firefighters
- Measure analytes in blood and urine
  - Flame retardants (PBDEs)
  - Perfluorinated compounds (PFCs)
  - Polycyclic aromatic hydrocarbons (PAHs)
  - Metals (Pb, Hg, As, Cd)
  - Pesticides (chlorpyrifos, pyrethroids)
- Environmental sampling in select firehouses
  - Flame retardants, PFCs



# Objective 4

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Assess exposures in a  
representative group of  
Californians





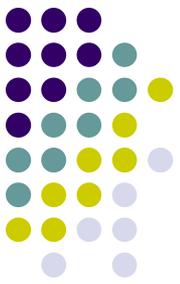
# Assess Exposures in a Representative Group of Californians



- Explore feasibility of accessing stored biospecimens collected statewide or regionally
  - Utility of biospecimens for chemical analysis
  - Costs to obtain and analyze
  - Appropriate sampling strategies



# Assess Exposures in Californians Exploring Collaborations

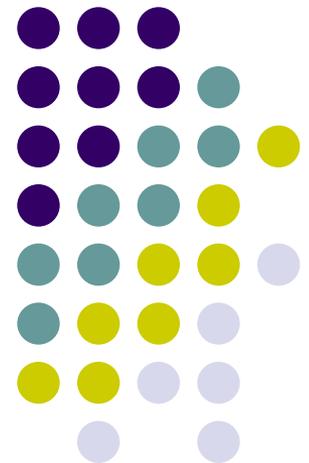


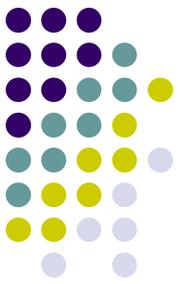
- Genetics Disease Branch, CDPH
  - Maternal serum, newborn screening blood spots
  
- Kaiser Research Program on Genes, Environment, and Health
  - Biobank repository
  - New specimen collection



# Objective 5

Collaborate with stakeholders,  
communities





# Engage and Collaborate With Stakeholders and Communities

- Contract with Health Research for Action, UC Berkeley School of Public Health
  - Targeted investigations and results communication
  - Biomonitoring primer brochure (July 2010)
  - Provide consultation for CECBP website and posting of the biomonitoring primer



# CDC Cooperative Agreement Summary



- Laboratory analysis of urine and blood
- Collaborations
  - Environmental Health Tracking Program
  - CYGNET
  - MIEEP
  - Firefighter exposures
  - Archived biospecimens
- Results communication and outreach

# Questions?

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