

March 16, 2012 Meeting of the Scientific Guidance Panel for Biomonitoring California

Summary of Panel Input and Recommendations

The Scientific Guidance Panel (SGP) for the California Environmental Contaminant Biomonitoring Program (also known as Biomonitoring California) met on March 16, 2012 in Oakland. This document briefly summarizes the Panel's input and recommendations on each agenda item and related public comments. To view or download the presentations, other meeting materials, and the full transcript, visit the [March SGP meeting page](#).

Program Update

[Presentation by Dr. Rupali Das](#), *Chief of the Exposure Assessment Section, California Department of Public Health (CDPH) and Lead of Biomonitoring California*

Document: [Sample FOX Results Return Materials \(mock results\)](#)

Panel members' input included:

- Consider expanding the FOX study with further Orange County Fire Authority collaboration and to other fire departments as resources become available.
- Consider how to maximize information from the pilot studies to design future studies. For example, if a chemical is rarely detected, consider if it is worth scaling up to a larger study or not. Or, if the detects occur with a particular pattern (by gender, for example), consider designing a study to look at that further.
- Consider expanding information in the FOX results return materials on reducing firefighter exposures via work practices and protective equipment, and disseminating it more widely, such as by producing a technical publication aimed at firefighters.

Public comment:

Sharyle Patton from the Commonwealth Biomonitoring Resource Center offered suggestions for results communication such as using protected online access and linked pages for more information on specific chemicals. Ms. Patton offered Commonwealth's assistance in future dissemination of FOX results to other firefighter groups, such as via an RSS feed that Commonwealth has set up.

Laboratory Update

[Presentation by Dr. Jianwen She](#), *Chief of the Biochemistry Section in the Environmental Health Laboratory Branch at CDPH*

[Presentation by Dr. Myrto Petreas](#), *Chief of the Environmental Chemistry Branch in the*

Environmental Chemistry Laboratory at the California Department of Toxic Substances Control

Panel members:

- Supported the use of dust measurements as a sentinel for what is in the indoor environment. Discussed how dust acts as a collector for chemicals being released over time by building materials, for example.
- Advised considering how less than 100% recovery of arsenic species, specifically the trivalent form of arsenic that has potential clinical implications, could affect interpretation of results.
- Proposed evaluating the feasibility of developing laboratory methods for a screening for some BPA substitutes and structurally related compounds (see more on this topic below).
- Proposed considering non-targeted screening for chemicals that are not yet being studied by the Program pending future purchase of appropriate equipment.

Biomonitoring California Findings

[Presentation by Dr. Rupali Das](#), *Chief of the Exposure Assessment Section, CDPH and Lead of Biomonitoring California*

Document: [Initial Results from Biomonitoring California Collaborations](#)

The Panel provided input on the Program's upcoming Data Summary Report, based on the interim progress report provided to them (see link above). Panel members suggested that the Program:

- Include an introductory section.
- Consider the target audience in developing the main messages of the report.
- Develop a message on the number of populations tested so far.
- Explain why the Program is important, such as how it is contributing to the building of biomonitoring infrastructure in the U.S. as recommended by the National Academy of Sciences.
- Include some specific information on Program results so far, by highlighting results for selected chemicals such as mercury and lead.
- Add clickable links in the online version of the Data Summary Report to specific documents for more information.
- Explain that the Program is not measuring all chemicals in the body, but rather a subset has been "looked for and found" and explain why that subset was chosen for measurement.
- Use "user-friendly" language to name chemicals such as PBDEs. For example, use deca-BDE rather than listing by number (i.e., BDE 209).
- Because of the heterogeneous nature of the pilot studies' results so far, aggregate the interim data only for limited purposes (e.g., detection frequency for aggregated data as provided in the interim progress report is acceptable). Do

not aggregate results from cord blood with other results. Do not provide descriptive statistics, such as mean or median, for interim aggregated data.

- Consider using visual display rather than only statistics to present the data.
- Consider reporting the percentage of people with results above the 50th percentile or 95th percentile of NHANES.
- Consider including the ranges (i.e., minimum to maximum) for chemical results in various populations studied so far.
- In the future, aim to release biomonitoring results to the participants and the public at the same time.

Diana Graham, a public commenter, highlighted the importance of public dissemination of Biomonitoring California results via the website.

Trudy Fisher, a public commenter, found the tables on detection frequency in the interim progress report to be effective and readable. She suggested using online links to direct those who are interested to more detailed chemical specific information.

Potential Designated Chemicals: Non-halogenated aromatic phosphates

[Presentation by Dr. Gail Krowech](#), *Staff Toxicologist, Office of Environmental Health Hazard Assessment (OEHHA)*

Document: [Non-Halogenated Aromatic Phosphates](#)

The Panel voted unanimously to recommend adding the class of non-halogenated aromatic phosphates to the designated chemical list.

Chemical Selection Planning

[Presentation by Sara Hoover](#), *Chief of the Safer Alternatives Assessment and Biomonitoring Branch, OEHHA*

Document: [Preliminary Screen of Bisphenol A Substitutes and Structurally Related Compounds](#)

Panel members provided input on the preliminary screen of bisphenol A substitutes and structurally related chemicals, advising the Program to:

- Apply multiple approaches to prioritize the chemicals for further consideration as potential designated chemicals, including:
 - Considering the information already collected in the screening document to winnow down the candidates further.
 - Conducting additional structure-activity analysis to determine chemicals of greatest concern.
 - Conducting a small pilot laboratory screening.

- Consider focusing on substitutes for BPA in hard plastic, which have specific relevance in California because of the recent ban of BPA in baby bottles and sippy cups (effective July 1, 2013).
- Investigate BPA substitutes in food contact uses, because of potential for higher exposures.
- Ask the U.S. Food and Drug Administration about BPA substitutes under consideration for food contact uses.
- Identify a few of the chemicals to move forward for consideration as potential designated chemicals, such as those with the most evidence for endocrine activity and human exposure.
- Widely disseminate information in the preliminary screen to the public and the scientific community, such via as a journal article on alternatives assessment with BPA alternatives as a case study.
- Consider how this preliminary screen might inform the Green Chemistry Initiative.

Panel members also supported the preparation by the Program of an abbreviated document to consider polycyclic aromatic hydrocarbons (PAHs) as a class for the designated chemicals list.

Public comment:

Davis Baltz from Commonweal supported the screening of BPA substitutes and structurally related compounds.

Nancy Buermeyer, on behalf of the Breast Cancer Fund, expressed support for the Panel and Program to look into the feasibility of monitoring BPA substitutes and structurally related compounds.

Matthew Gribble from the Johns Hopkins School of Public Health recommended the synthetic musk fragrances for biomonitoring due to their structural similarities to PAHs, common exposures in the population, and current lack of survey data.

