

March 13, 2015 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 13, 2015 in Oakland. This document briefly summarizes the Panel's input and recommendations on each agenda item and related public comments. Visit the [March 2015 SGP meeting page](#) to view or download the presentations, other meeting materials, and the meeting transcript.

Panel Business

Dr. Scott Bartell was sworn in as a new Panel member.

Program and Laboratory Updates

[Program Update](#)

Presentation: Michael DiBartolomeis, Ph.D., D.A.B.T., Chief, Exposure Assessment Section, Environmental Health Investigations Branch, California Department of Public Health (CDPH); Lead of Biomonitoring California

[Environmental Health Laboratory Update](#)

Presentation: Jianwen She, Ph.D., Chief, Biochemistry Section, Environmental Health Laboratory Branch, CDPH

[Environmental Chemistry Laboratory Update](#)

Presentation: Myrto Petreas, Ph.D., M.P.H., Chief, Environmental Chemistry Branch, Environmental Chemistry Laboratory, Department of Toxic Substances Control (DTSC)

Panel members:

- Praised the Program's priority initiatives outlined by Dr. DiBartolomeis:
 - Statewide representative sampling
 - Biomonitoring intervention study
 - Consumer product biomonitoring case study
 - Environmental justice project
 - Biomonitoring health care trainees
- Described an intervention study proposed to the California Breast Cancer Research Program that will involve replacing cosmetics for one month and examining biological effects via breast biopsies, as a potential collaboration opportunity for the Program.
- Described a pilot collaboration between Dr. Bradman and Dr. Chris Simpson, of University of Washington, to compare urinary levels of 1-nitropyrene in children

from East Oakland and Salinas as a potential future opportunity for the Program to study diesel exposure. Developing a diesel biomarker was noted as important for environmental justice projects.

- Suggested that in designing intervention studies, the Program consider sampling more than just dust and urine, in particular dermal exposure (e.g., via skin wipes).
- Raised the idea of an occupational intervention study (e.g., studying firefighters as new recruits prior to occupational exposures to chemicals).
- Highlighted Biomonitoring California's efforts in developing best practices on returning results and encouraged the Program to explicitly look at best practices for communicating results to disadvantaged or minority communities in an environmental justice project.
- Encouraged the Program to continue pursuing studies like Measuring Analytes in Maternal Archived Samples (MAMAS) and the [Biomonitoring Exposures Study \(BEST\)](#), as avenues for approximating a statewide representative sampling in light of limited funding. Recommended the Program explicitly look at how each of these studies falls short of representative sampling (for example, identifying populations not covered by these studies).
- Raised concerns about the potential impacts of [AB 170](#) on the availability of archived biospecimens for future biomonitoring research and proposed that the Panel write a letter on this bill. *After the meeting, OEHHA staff suggested that, if Panel members wish to comment on the bill, they write letters as individuals expressing their own opinions.*

Public comment:

Susan Kreutzer (no stated affiliation) encouraged the Program to investigate chemical influences on myalgic encephalomyelitis, previously referred to as chronic fatigue syndrome. She suggested conducting biomonitoring studies in areas where cluster outbreaks occur.

Dr. Veena Singla, of the Natural Resources Defense Council (NRDC), supported the proposal to study dermal exposure, especially for firefighters. Dr. Singla commended Program progress on method development for bisphenol A (BPA) alternatives, citing new studies that show similar potential effects (endocrine, neurodevelopmental) of bisphenol S and bisphenol F compared to BPA.

Tom Jacob, of the Chemical Industry Council of California, suggested the Program tap into the technical expertise of industry groups, such as the Personal Care Products Council or the Consumer Specialty Products Association.

Updates from CDC's National Biomonitoring Program

Presentation: Lovisa Romanoff, M.S., M.P.H., *Health Scientist and Project Officer for State Biomonitoring* and Mary Ellen Mortensen, M.D., M.S., *Chief Medical Officer, Division of Laboratory Sciences, National Center for Environmental Health*; Centers for Disease Control and Prevention (CDC)

Panel members:

- Commended CDC on the inclusion of smoker versus non-smoker data to provide context for biomonitoring results.
- Highlighted the importance of National Health and Nutrition Examination Survey (NHANES) data in establishing national reference levels for chemicals in blood and urine.
- Commended CDC on the expansion of NHANES urine sampling to include 3 year old children, and re-emphasized the importance of including younger children in future Biomonitoring California studies.
- Noted the difficulty of obtaining region-specific data from NHANES.
- Discussed the feasibility of obtaining archived samples collected originally as part of the National Children's Study (NCS), particularly those from California participants in NCS.

Public comment:

Nancy Buermeyer, of the Breast Cancer Fund (BCF), highlighted the importance of NHANES data in her work. She suggested adding detection frequency and summary statistics on the number of phthalates found in each individual to the National Report.

Results of the [HERMOSA¹ Study](#): Reducing teenagers' exposures to phthalates and phenols in personal care products

Presentation: Kim Harley, Ph.D., *Associate Adjunct Professor, Maternal and Child Health; Associate Director for Health Effects, Center for Environmental Research and Children's Health*; University of California, Berkeley

Panel members and the audience discussed with Dr. Harley:

- Elements of the HERMOSA study design, such as involving the youth as study researchers, use of social media and texting, incentives aimed at teenager participation, choice of easily available and teenager-approved replacement personal care products, careful tracking of brands to identify sources of specific chemicals, and peer-to-peer education on the chemical exposure results.

¹ Health and Environmental Research in Make-up of Salinas Adolescents (HERMOSA)

- Reasons why targeted chemicals were still detected in participants' urine after the intervention (e.g., additional undetermined exposure sources; residual exposures from prior to intervention).
- Challenges in designing intervention studies posed by limited ingredient information on product labels, in particular for fragrances, and rapidly changing product ingredients due to market shifts.
- Compliance as a possible issue in intervention studies, and how the HERMOSA design addressed that by requiring that replacement products be used for only three days. This approach was feasible given the short half-life of the chemicals chosen for study.
- Compliance outside the home specifically with regard to triclosan in soap, which was addressed by providing small squirt bottles of soap for participants to carry.
- The potential for intervention studies to have significant policy impacts, because the timeline for completion is short, the studies are well-controlled, and the intervention can have demonstrable results on chemical exposures.
- The benefits of employing youth researchers in the study, including their ability to quickly recruit other teens and help design relevant questions on products the teens used.

Potential Designated Chemicals: Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs)

[Document: Perfluoroalkyl and Polyfluoroalkyl Substances \(PFASs\)](#)

[Presentation](#): Lauren Joe, Epidemiologist, Environmental Health Investigations Branch, CDPH

[Presentation](#): Dr. Gail Krowech, Staff Toxicologist, OEHHA

Panel members:

- Unanimously voted to recommend adding “perfluoroalkyl and polyfluoroalkyl substances (PFASs)” to the list of designated chemicals for Biomonitoring California.

Public comment:

Dr. Veena Singla of NRDC, Simona Balan of the Green Science Policy Institute, and Nancy Buermeyer of BCF spoke in favor of the adding PFASs to the list of designated chemicals for Biomonitoring California.

The FluoroCouncil submitted a [letter](#) that encouraged a high level of transparency and public engagement in selecting specific PFASs for biomonitoring studies and developing analytical methods. The letter further noted the chemical complexity of the PFAS class, making it critical that “the associated analytical technique(s) are appropriate for the

specific substances and matrices to be tested and meet established criteria for accuracy, reliability, and precision.”

Open Public Comment Period:

Alexander Hoepker of UC Berkeley noted the need for efforts to reduce regrettable substitutions, and suggested Biomonitoring California weigh in on safer chemicals.

Nancy Buermeyer of BCF commented that information gathered by Biomonitoring California helps DTSC decide which chemical/product combinations to look at as part of the Safer Consumer Products (SCP) program.

Dr. Meredith Williams of DTSC stated that the [three-year workplan](#) for the SCP program explicitly identified biomonitoring results as an important factor in choosing product categories and individual priority products. She noted the fundamental importance of Biomonitoring California in SCP decision making and the intention for the two programs to form a strong partnership going forward.

