

November 3, 2016 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 November 3, 2016 in Richmond. This document briefly summarizes the Panel's input and recommendations on each agenda item and related public comments. Visit the [November 2016 SGP meeting page](#) to access the presentations, other meeting materials, and the meeting transcript.

Program Update

[Presentation](#): Nerissa Wu, Ph.D., Chief, Chemical Exposure Investigations Unit, Environmental Health Investigations Branch, California Department of Public Health (CDPH)

The Panel:

- Expressed continued support for the Multi-Regional Study across California and made a number of suggestions for study design, including:
 - Balance the focus on exposures defined by geographic regions with continued investigations of specific populations defined by ethnicity, socioeconomic status, urban/rural, and other factors. It is easier to find a “hot spot” in a more narrowly defined group, versus in a population-based sample.
 - Design recruitment materials, as resources allow, to capture unique regional populations in California (such as the Iraqi population in San Diego), versus only English and Spanish speakers.
 - Study the lessons learned in recruitment for the National Children's Study to avoid those pitfalls.
 - Include social media and in-person visits to community groups as part of recruitment strategies.
 - Conduct outreach to inquire about specific community concerns, regional chemical exposures, and environmental justice issues, to help inform the study design and evaluate how best to group the counties into regions.
- Provided suggestions on options for the diesel exhaust exposure study in the San Francisco Bay Area, including:
 - Sampling along the Interstate 880 corridor.
 - Evaluating school bus exposures.
 - Comparing areas with and without truck and bus idling rules.

- Comparing exposures to air pollutants before and after installation of air filtration systems in schools as part of a settlement in the South Coast Air Quality Management District.
- Offering some sort of assistance, such as installation of air filtration systems (as resources allow), to the studied community to address exposures that are measured.

Public comment: Dr. Veena Singla of the Natural Resources Defense Council noted that the Multi-Regional Study can potentially show the uniqueness of California exposures compared to other states (e.g., flame retardant exposures). She also recommended taking into account the socioeconomic and racial diversity in Los Angeles County as part of determining the most relevant chemical panels to measure (e.g., if previous studies have shown disproportionate exposures to particular contaminants in those populations).

Laboratory Updates

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

Presentation: June-Soo Park, Ph.D., Chief, Biomonitoring Branch, Environmental Chemistry Laboratory, Department of Toxic Substances Control

The Panel:

- Discussed the choice of benzophenones as the first class examined in the pilot non-targeted screening project conducted by EHL.
- Suggested that the Program consider the classes of chemicals flagged by the SGP as priority chemicals in choosing the next class for non-targeted screening work.
- Supported the Program's work to develop a master laboratory method across several classes of chemicals as a way to more efficiently measure a broader panel of analytes.
- Discussed important considerations in carrying out non-targeted screening analyses:
 - Consider excluding illicit substances, or other analytes that could pose privacy concerns.
 - Design understandable results return materials.
 - Look into whether our biomonitoring results could be subpoenaed and if we could obtain a certificate of confidentiality.
 - Use banked samples, such as from the Genetic Disease Screening Program.
- Recommended that we hold a special session on ethics to discuss some of the above issues in more detail at a future SGP meeting.

Update on the [California Teachers Study](#) (CTS)

Presentation: Peggy Reynolds, Ph.D., Senior Research Scientist, Cancer Prevention Institute of California

The Panel discussed a wide-range of topics with Dr. Reynolds, including:

- Relationship between diet (e.g., vegetarian) and levels of persistent organic pollutants (POPs).
- Preliminary CTS data on time trend in perfluoroalkyl and polyfluoroalkyl substances (PFASs).
- Examination of traffic data and air pollution in relationship to cardiovascular endpoints.
- Conducting analyses across multiple generations using CTS cohort data linked to birth records, to delve further into topics such as epigenetics.
- Aspects of community-based participatory research, such as:
 - Developing true partnerships with community organizations, with the recognition that the research agenda for these projects are initiated and guided by the community.
 - Challenges involved in individual-level biomonitoring results return. Dr. Reynolds' acknowledged Biomonitoring California staff in supporting results return for her project on "Community Health Impacts of Mining Exposure (CHIME)".
 - Special considerations in developing the consent form for household environmental sampling and in returning these results.

Possible Classes of Chemicals Used in UV Applications¹ For Future Consideration as Potential Designated Chemicals

Document: Preliminary screening information on possible classes of chemicals used in UV applications

Presentation: Laurel Plummer, Ph.D., Staff Toxicologist, Office of Environmental Health Hazard Assessment (OEHHA)

The Panel:

- Expressed interest in OEHHA preparing documents on both classes of UV stabilizers described in the preliminary screen, i.e., benzophenones and phenolic benzotriazoles.
- Suggested that more classes of UV stabilizers, such as additional types used in sunscreens, be researched and tracked.

SGP Agenda Planning for 2017

Presentation: Sara Hoover, M.S., Chief, Safer Alternatives Assessment and Biomonitoring Section, OEHHA

The Panel agreed with the 2017 agenda topics proposed in the presentation, and provided the following additional input:

- For the 10th anniversary celebration:
 - Be sure to highlight results return as a key Program accomplishment.

¹ "UV applications" includes uses as UV stabilizers, UV absorbers, or photoinitiators, for example.

- In addition to reflecting on past accomplishments, discuss priorities going forward.
- Broadly publicize the event, including inviting politicians if possible.
- Expand geographic outreach across California to broaden public input at SGP meetings.
- For environmental justice projects, focus on documenting exposures (like diesel exhaust) that differentially impact vulnerable populations and are less under personal control; and identify interventions that could help.
- Look at possible exposures of concern through use of reclaimed water, which is an issue in Southern California.
- Review the designated list for coverage of chemicals of concern for breast cancer.
- Discuss costs of Biomonitoring California's analytical services and ways to better leverage resources.

Public comment: Dr. Singla applauded Biomonitoring California's coordination with the Safer Consumer's Product program. She recommended looking for opportunities to coordinate the Program's environmental justice work with existing priorities in CDPH and OEHHA to leverage limited resources and maximize the impact of the results. Regarding the 10th anniversary celebration, Dr. Singla indicated that having the Report to the Legislature released by then would highlight the Program's recent accomplishments. She also expressed interest in continued screening of other chemical classes of emerging concern.

