EHS core center grantees gather in Seattle for annual meeting

By Sara Mishamandani

The University of Washington (UW) Center for Ecogenetics and Environmental Health *(http://depts.washington.edu/ceeh/index.php)* (CEEH) hosted the 2013 NIEHS Environmental Health Sciences (EHS) Core Centers *(http://www.niehs.nih.gov/research/supported/dert/sphb/programs/core/index.cfm)* meeting April 17-19 in Seattle. The meeting brought together NIEHS staff and members from 20 core centers to share their latest work in environmental health, foster collaborations, and highlight novel research and community engagement activities.

NIEHS and NTP Director Birnbaum and CEEH Director Eaton, welcomed meeting attendees at the opening reception. Birnbaum also spoke during the public forum on the Duwamish River cleanup. (Photo courtesy of Rachel McDuffie, University of Michigan)

The meeting featured scientific sessions on gene-environment interactions and global environmental health, breakout sessions with topics ranging from hydraulic fracturing to bidirectional communication, and a session highlighting research of young investigators. The meeting also included a community forum to learn about the Duwamish River cleanup project, which ended with an educational tour of Puget Sound, to inform participants about local Superfund sites and remediation efforts.

Collaborative EHS research

David Eaton, Ph.D., director of CEEH, chaired a session on the future of gene-environment interactions research. John Stamatoyannopoulos, M.D., associate professor of genome sciences and medicine at UW, described the Encyclopedia of DNA Elements, *(http://www.nature.com/nature/journal/v489/n7414/full/nature11247.html)* a forward-looking, data-rich project aimed at identifying all functional elements encoded in the human genome. Stamatoyannopoulos explained the project's potential to yield many exciting insights on the role of gene-environment interactions in disease and epigenetics in human susceptibility to toxicants.

University of Michigan COEC Coordinator Myra Tetteh, right, discusses community outreach activities with Les Reinlib, Ph.D., NIEHS EHS Core Centers program director, during the meeting poster session. Reinlib also introduced young investigators who gave talks on their scientific research during the meeting. (Photo courtesy of Rachel McDuffie, University of Michigan)

During another session, an inter-core center working group on hydraulic fracturing convened to discuss its research and community engagement recommendations. Trevor Penning, Ph.D., from the University of Pennsylvania (UP), facilitated the discussion on the current research gaps. Participants explained the need for baseline air and water quality data, and highlighted a collaborative study, between UP and Columbia University, to collect environmental data in Pennsylvania, where hydraulic fracturing is prevalent, and in New York, where hydraulic fracturing has not yet begun.

The group discussed the importance of compiling data from related studies and preserving its quality. Harvard University's EHS core center has initiated this process with FrackMap, *(http://worldmap.harvard.edu/maps/FrackMap)* a compilation of data related to hydraulic fracturing, through the Harvard University WorldMap project, an open-source web mapping system.

Senior Medical Advisor Aubrey Miller, M.D., provided grantees with an update on NIEHS disaster research and training. (Photo courtesy of Sara Mishamandani)

COEC efforts

Community outreach and engagement core (COEC) leaders shared past accomplishments and considered future efforts to sustain and strengthen their work. They started the meeting by convening a history wall to capture the many COEC milestone events and accomplishments since the beginning of the EHS Core Center program. The history wall served as a way to introduce many of the new COEC members to the program. Throughout the meeting, COEC leaders focused on evaluation; emerging topics, such as environmental health literacy, social media, and health impact assessments; and peer mentoring.

One of the sessions focused on preparing the next generation of environmental health scientists and building a diverse workforce. They all agreed that making science real community residents and youth, starting as young as elementary students, was central to this effort.

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To start off the meeting, COEC directors participated in a history wall activity. They brought in photos and materials from their COEC and added them to a timeline. Kathleen Vandiver, Ph.D., from MIT, left, and NIEHS COEC program lead Liam O'Fallon, add to the history wall. (Photo courtesy of Sara Mishamandani)

Ann Backus, Harvard University COEC director, had materials and events going back to the early 1960s, when the Harvard Center for Environmental Health was founded. (Photo courtesy of Naomi Hirsch, Oregon State University)

The public forum, held at a local cafe, covered topics related to remediation efforts on the Duwamish River, such as upstream pollution control, industry on the river, health effects research, and impacts on tribal communities. (Photo courtesy of Naomi Hirsch, Oregon State University)

The industrial sites on the Duwamish River were presented firsthand. Meeting participants saw pictures of local Superfund sites and learned about Superfund research from UW scientist Evan Gallagher, Ph.D., and his student, Chase Williams. James Rasmussen, Duwamish River Cleanup Coalition coordinator, also spoke to the group about the Duwamish Superfund site cleanup efforts. (Photo courtesy of John Schelp, NIEHS)

NIEHS community forum: Seattle waterways and your health

As part of the EHS Core Centers meeting, NIEHS and NTP Director Linda Birnbaum, Ph.D., joined local researchers, government officials, and industry experts at a public forum on the health impacts and pollution in Seattle's working river, the Duwamish. Seven short, lively presentations were followed by questions and discussion. The public forum was an opportunity to hear various perspectives about the historical, environmental, cleanup, and health issues on the Duwamish.

The Port of Seattle, Boeing, and other industries are located on the river. The Duwamish Superfund site, a 5.5 mile stretch of the river that flows into Elliott Bay, is one of the most polluted places in the United States. The U.S. Environmental Protection Agency (EPA) released its proposed cleanup plan for the site on February 28, and this timely forum occurred during the 90-day public comment period on EPA's proposed plan.

The diverse, historic Georgetown and South Park neighborhoods along the Duwamish are home to a disproportionate number of low-income, Hispanic, and recent immigrant residents. The river is also part of the traditional fishing grounds of three Northwest tribes.

Although a Washington State, Department of Health advisory warned residents not to eat fish or shellfish from the Duwamish River, health officials know that many people still subsidize their diets with the contaminated fish. They do so because of economic necessity, a misunderstanding of the danger, or an acceptance of the health risks.

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