

Report to the National Advisory Environmental Health Sciences Council
Director, NIEHS

1 September 2011

Director's Message

The NIEHS Strategic Planning process completed the second phase with the Stakeholder Community Workshop, held here in RTP in July. Many of you participated in the workshop and I thank you for your continuing to bring your expertise and effort to this process. The workshop format, Open Space Technology, was a departure from our traditional means of gathering information, and I believe went a long way toward generating strategic thinking, creative ideas, and positive energy around the institute and our strategic planning. The workshop generated 124 breakout discussions, resulting in 97 reports (some were combined), and ultimately coalescing 12 strategic themes. The information from this workshop will now be synthesized with the Visionary Ideas we collected on our website for use in the next phase, which will be a Strategic Planning Working Group meeting in October. At this meeting, a smaller group including NIEHS leadership and outside leaders in the field will draft new Mission and Vision Statements for the institute and a draft set of Strategic Goals for public comment.

With fortuitous timing, we have filled out our permanent leadership team. I'm pleased to introduce you to Ms. Joellen Austin, who joined us in June as our Executive Officer, and to inform you of the selection of Dr. Darryl Zeldin as our Scientific Director. Dr. Fred Miller will provide leadership as Acting Clinical Director.

Two other of our current scientific staff have recently received recognitions that are so significant I want to mention them here. Physician-scientist and clinical researcher Capt. Lisa Rider has been named the 2011 Physician-Researcher of the Year by the Public Health Service for her groundbreaking research on juvenile dermatomyositis, a mysterious and debilitating autoimmune disease among children, that is thought to be caused by a combination of environmental exposures and genetic polymorphisms. Dr. Tom Kunkel has been honored as an NIH Distinguished Investigator, a title reserved for tenured intramural senior investigators who are at the highest level of accomplishment in their respective fields. Dr. Kunkel has spent nearly 30 years of his career at NIEHS and currently serves as chief of the Laboratory of Molecular Genetics DNA Replication Fidelity Group and chief of the Laboratory of Structural Biology.

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Strategic Planning

As mentioned earlier, our Strategic Planning process continued in July with a Stakeholder Community Workshop titled "Moving Environmental Health Forward: Insights and Opportunities," that brought together over 170 external stakeholders and NIEHS staff for two days of discussion of the field of environmental health science and potential directions for our institute. The meeting generated 97 breakout discussion reports on a wide variety of topics, as well as 12 thematic reports, all of which are posted online for reading and comments at the NIEHS Strategic Planning website [<http://www.niehs.nih.gov/about/od/strategicplan/stakeholder-community-workshop/index.cfm>]. Feedback received from the participants was largely praise for the Open Space Technology format that allowed a free-flow of ideas, as well as a sense of energy and inclusiveness of the stakeholder community. In the next phase of this process, a smaller group of NIEHS and external thought leaders will gather in October to draft new Mission and Vision Statements and a set of Strategic Goals for the institute. These will then be posted and disseminated for public comment.

Breast Cancer

NIEHS activities around the research topic of breast cancer have been especially productive in recent months. In May, the Interagency Breast Cancer and Environmental Research Coordinating Committee (IBCERCC), which was created by Congressional mandate in 2008 and is led by NIEHS, held its second in-person meeting at NIEHS. The advisory panel is charged with developing a comprehensive report on federal research on environmental factors in breast cancer. Three subcommittees: state of the science, research process, and research translation, dissemination, and policy are responsible for sections of the report. The next full committee meeting is scheduled for September.

The Breast Cancer and the Environment Research Centers held their annual grantee meeting in July at ??? This network of scientists, clinicians, and breast cancer advocates collaborate to determine how chemical, physical, biological, and social factors in the environment interact with genetic factors to cause breast cancer.

In April, Dr. Edison Liu, executive director of the Human Genome Institute of Singapore delivered a Distinguished Lecture on systems approach to breast cancer focusing on estrogen receptor alpha, a key molecule associated with breast cancer prognosis.

The NIEHS-funded [Bay Area Breast Cancer and the Environment Research Center \(BABCERC\)](#)  was recently presented with the esteemed "Award of Distinction by the International Academy of the Visual Arts for its video "The Breast Biologues: A biology dialogue about breast cancer and the environment." The video is an educational documentary that helps to communicate the importance of timing of exposure during

critical windows of susceptibility in the development of breast cancer.

Public Health Leadership

NIEHS scientists and staff are setting the standard for public health leadership at both the national and international levels through a wide variety of activities.

National Conversation on Public Health and Chemical Exposures

NIEHS scientists and staff including John Balbus, Jean Harry, Liam O'Fallon, Fred Miller, and Beth Anderson contributed to the National Conversation on Public Health and Chemical Exposures Action Agenda, which was released in early June. The agenda is the output of a two-year collaborative effort to identify potential risks to public health and explore possible solutions in areas like policy reform, chemical exposure prevention, and the promotion of children's health. The Agenda is available at:

<http://www.nationalconversation.us/action-agenda/downloads>.

Healthy People 2010

NIEHS is a co-lead with the CDC on the Environmental Health chapter of Healthy People 2010, which is in the final stages of review. This chapter includes objectives that monitor progress in six areas including: Outdoor Air Quality, Surface and Ground Water Quality, Toxics and Waste, Healthy Homes and Healthy Communities, Infrastructure and Surveillance, and Global Environmental Health.

Global Alliance for Clean Cookstoves

An international workshop convened in May and spearheaded by NIEHS, the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), and the Fogarty International Center (FIC), discussed current evidence on adverse health effects of indoor air pollution and potential solutions to this global problem. The meeting of more than 150 scientists and policy makers from multiple countries focused on research gaps, exposure assessment, and the burgeoning global initiative, the Global Alliance for Clean Cookstoves, which aims to deliver clean, affordable cookstoves to the developing world.

Partnerships for Environmental Public Health (PEPH) Workshop on Environmental Health Communication: Methods, Research, and Training

The Partnerships for Environmental Public Health program brought grantees together in July for a day of hands-on training and networking around the topic of environmental health communication methods.

12th Report on Carcinogens

The latest HHS *Report on Carcinogens* was released by the NIEHS on June 10. This version of the report added the substances formaldehyde and aristolochic acid as "known human carcinogens." Six other substances were listed as "reasonably

anticipated to be human carcinogens,” including: captafol, cobalt-tungsten carbide, certain inhalable glass wool fibers, o-nitrotoluene, riddelline, and styrene.

ICCVAM

In July, the Interagency Coordinating Committee on the Validation of Alternative Methods transmitted recommendations to federal agencies on alternative methods for product safety testing to identify substances that have a high potential for causing allergic contact dermatitis (ACD) in humans. According to the U.S. Bureau of Labor Statistics, occupational skin diseases are the most common type of occupational illness. The ICCVAM recommendations are for use of the murine local lymph node assay, or LLNA, to categorize the potency of chemicals that cause ACD in humans.

NTP Office of Health Assessment and Translation

The National Toxicology Program and the National Institute of Environmental Health Sciences have established the NTP Office of Health Assessment and Translation, led by Dr. Kris Thayer. This office replaces the former Center for Evaluation of Risks to Human Reproduction, and will serve as an environmental health resource to the public and to regulatory and health agencies. The office will conduct evaluations to assess the evidence that environmental chemicals, physical substances, or mixtures (collectively referred to as "substances") cause adverse health effects and provide opinions on whether these substances may be of concern given what is known about current human exposure levels.

Leadership and Succession

At NIEHS, we are taking a proactive approach to succession planning by actively training our next generation of leaders through both NIEHS and NIH leadership programs. A cohort of 15 mid-level to senior staff is participating in a two-year pilot leadership program here at NIEHS. Similarly, two NIEHS staff, health science administrator Heather Henry in the Superfund Research Program and program analyst Kimberly Thigpen Tart in the Office of Policy, Planning, and Evaluation, were recently selected to participate in the NIH Mid-Level Leadership Program, also in its pilot year.

Environmental Sustainability

NIEHS received an honorable mention in the Environmental Stewardship category of the FY2010 U.S. Department of Health and Human Services (HHS) Green Champions Awards Program for our achievement in composting nearly 16,000 pounds of cafeteria waste. NIEHS Sustainability Coordinator Trish Castranio announced the award in an email to staff saying, “We are proud of the example we set as an environmental institute to protect human health and the environment in our work as well as in our daily life.”

Several NIEHS scientists and staff, led by Senior Advisor for Public Health Dr. John Balbus, contributed to the crafting of a recently released HHS Sustainability and Adaptation Policy Statement that provides both a commitment to and guidance for the department and its agencies in implementing sustainable practices.

Sustainable Remediation 2011: State of the Practice - Green Chemistry, Human Health, and Environmental Response was organized by Dr. Heather Henry, health scientist administrator in the Superfund Research Program. The multi-agency event was held June 1-3 in Amherst, Massachusetts.

Training and Education

NIEHS engages in a wide variety of training and education activities both on site at the institute and through scientific outreach. A number of recent examples include:

2011 Biomedical Career Fair

The 14th annual NIEHS Biomedical Career Fair, organized by postdoctoral fellows from the NIEHS Trainees assembly, was held in April and drew 382 students and trainees from across North Carolina to the EPA campus to explore jobs in the biomedical sciences and network with science professionals.

EPA-NIEHS Student Workshop on Climate Change

From June 13-17, 26 academically talented high school students participated in a joint program hosted by the EPA and NIEHS on the topic of climate change and health. Scientists and staff from both agencies delivered presentations and the students engaged in hands-on activities, experiments, and group projects to facilitate their learning experience. The program was organized at NIEHS by Dr. Banalata Sen from EHP, and Carly Carroll, an EHP communications contractor.

2011 NIEHS Summer Intern Program

50 students participated in the 2011 NIEHS Summer Internship Program. The internship summer interns a full program of training, career development, and scientific presentations, to complement their summer laboratory experience at the Institute.

Collman Commencement Speech

DEPT Director Gwen Collman welcomed a new generation of public health leaders on May 24 in her commencement address at the Graduate Program in Public Health at Stony Brook University.

Stumpf at Science Café

Postdoctoral fellow Jeffrey Stumpf, a member of the NIEHS Mitochondrial DNA Replication Group, engaged the public at an informal learning venue called *Science Café*. About 100 community members gathered at The Irregardless Café in Raleigh to hear Stumpf speak about science advances in his field. The *Science Café* series is sponsored by the North Carolina Museum of Natural Sciences  and the scientific research society Sigma Xi.

2011 Wisconsin Regents Teaching Excellence Award

Grantee Craig Berg was recently honored with the 2011 Wisconsin Regents Teaching Excellence Award. Berg is director of the Milwaukee Collaborative Science and Mathematics Teacher Education Program (MACSTEP), an innovative approach to producing exemplary science teachers. He is a co-principal investigator at the NIEHS Children's Environmental Health Sciences Core Center. The award is the UW system's highest recognition for members of its faculty and academic staff.

SRP Webinar: Community Engagement: Train the Trainer

The latest in the Superfund Research Program webinar series: Community Engagement, took place July 7 with a Train the Trainer focus on community advocates working with Native American populations and presenters including SRP grantees from the University of Arizona, Jefferson State Community College, and the Poarch Band of Creek Indians.

Meetings and Events

- The 2011 Rodbell Lecture was given by Dr. Brigid L.M. Hogan, director of the Duke Stem Cell and Regenerative Medicine Program.
- North Carolina Representative David Price (D) held a Town Hall at NIEHS on June 17 to discuss issues of concern to the employee community.
- The Scientific Advisory Committee on Alternative Toxicological Methods (SACATM) held its annual meeting June 16-17 in Virginia. The Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) announced the availability of its test method evaluation report (TMER) for use in dermal exposures. The center and the committee have now contributed to the endorsement or adoption of 42 new alternative methods.
- This year's Outstanding New Environmental Sciences Grantees meeting saw the final year reports of the program that began in 2006 and invited all 35 ONES grantees to come together to share the knowledge gained during the program. The program is being transitioned to other funding mechanisms.
- The IOM Roundtable on Global Health and Sustainable Development was held in Woods Hole, Massachusetts in July, where members examined a number of issues including the potential role of the federal agencies in this field.
- The National Research Council's Committee on Emerging Science for Use in Decision Making, led by NIEHS, held a meeting in July on the topic of chemical mixtures and the challenges such exposures pose to preventing chemical risks to humans.
- Members of the NIEHS nanotechnology consortium gathered at the University of Washington School of Medicine in Seattle, June 15-16 for the second official meeting of the group to cover research progress updates.

Upcoming:

- The third Toxicogenomics Integrated with Environmental Sciences Conference will be held September 15-16 at the University of North Carolina at Chapel Hill. The theme of the conference is "The Biology and Bioinformatics behind Environmental and Toxicologic Influences."

Awards and Recognition

- NIEHS/NTP Staff Scientist Dr. Grace Kisling was inducted August 2 as Fellow of the American Statistical Association, the highest honor in her field.
- NIEHS Chief of Staff Cmdr. Paul Jung, M.D., was honored on June 22 with the U.S. Public Health Service (USPHS) Asian Pacific American Officers' Committee RADM Samuel Lin Senior Officer Award for his work in mentoring in the Asian Pacific medical community.
- A paper by a team of NIEHS researchers led by Dr. Serena Dudek and published in *Nature Neuroscience* was recognized by the Faculty of 1000. The study details the mechanism underlying rapid transcription of immediate early genes in neurons.
- NIEHS visiting fellow Javier Revollo, Ph.D., received the Presidential Poster Award at ENDO Expo 2011: The 93d Annual Meeting of the Endocrine Society.
- NIEHS Superfund Research Program Director Dr. Bill Suk was recognized with the Adel Sarofim Award for Excellence in Combustion Research
- NIH Fellows Award for Research Excellence (FARE)
- NIEHS Postdoctoral Fellow Steven Roberts of the Laboratory of Molecular Genetics (LMG) Chromosome Stability Group won best poster award at the 2011 Gordon Conference on Genetic Toxicology. The poster was entitled: "Damage-Induced Localized Hypermutability at Double-Strand Breaks and Replication Forks."

News from Building 1