

Report to the National Advisory Environmental Health Sciences Council

May 22, 2012

**Linda Birnbaum, PhD, DABT, ATS
Director**

National Institute of Environmental Health Sciences
National Toxicology Program



NIEHS Strategic Planning – Update

Planning for Institute direction for next 5 years

- New Mission and Vision statements
- Development of Supporting Themes
- Strategic Goals and implementation

Three phase process

- I. **Done!** Broad-based stakeholder input
 - Visionary Ideas solicited on the Web
 - Stakeholder Community Workshop July 2011
- II. **Done!** Draft Mission, Vision, and Supporting Themes
 - Strategic Planning Workshop October 2011
- III. **Done!** Develop Strategic Goals

Strategic Planning Process



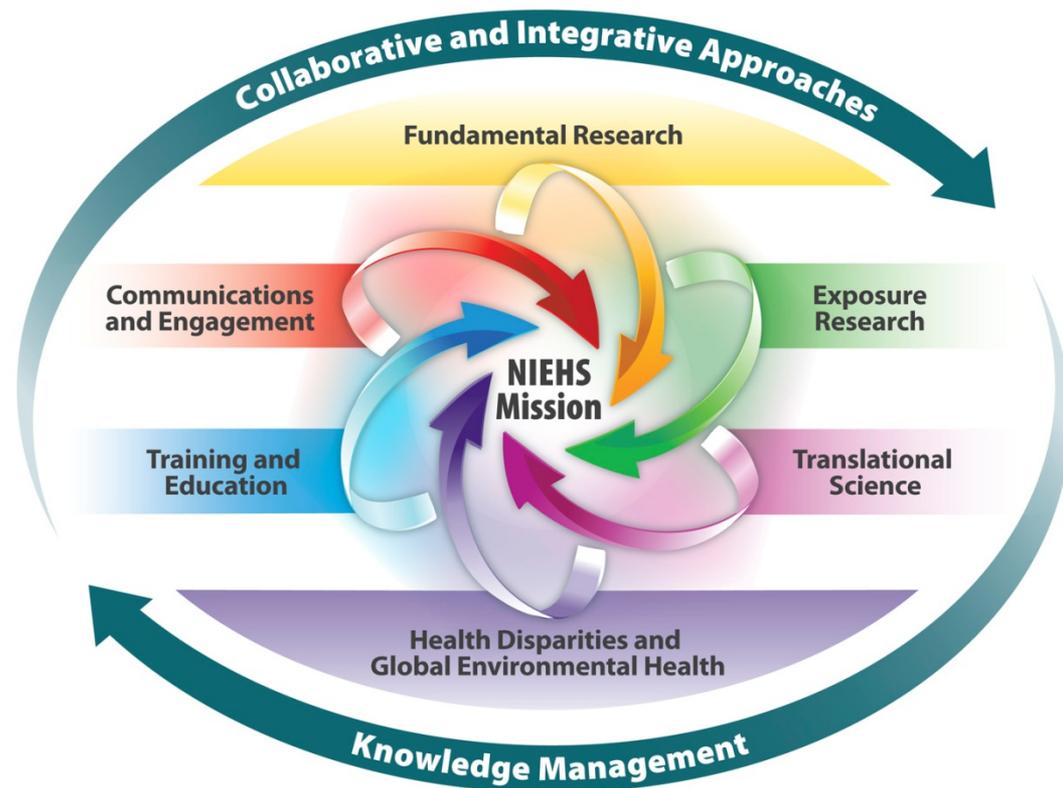
NIEHS Strategic Planning

Mission Statement

The mission of the National Institute of Environmental Health Sciences is to discover how the environment affects people in order to promote healthier lives.

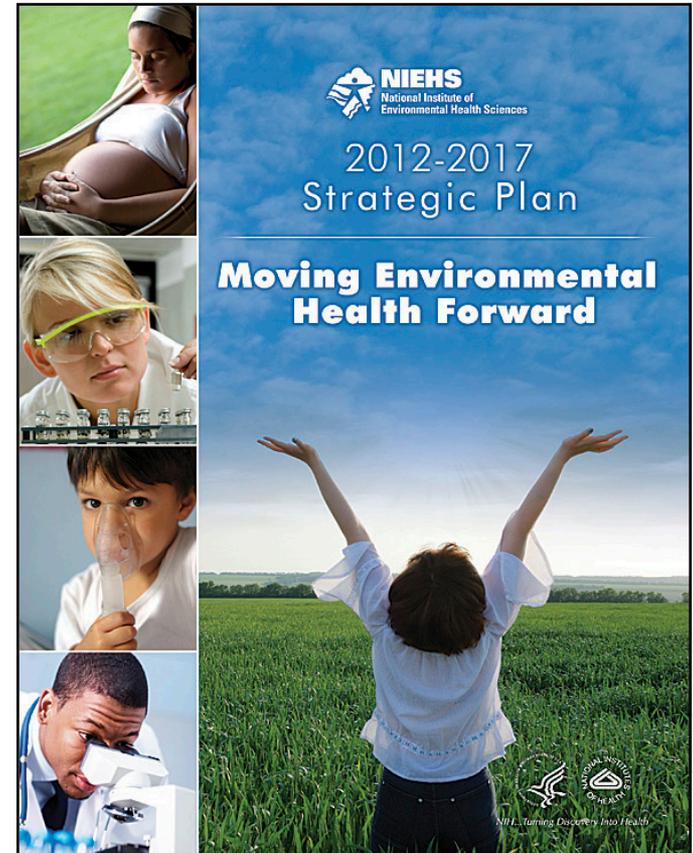
Vision Statement

The vision of the National Institute of Environmental Health Sciences is to provide global leadership for innovative research that improves public health by preventing disease and disability from our environment.



Strategic Themes and Goals

- Themes give context;
Goals are more specific
- Addressing Goals will include both ongoing activities and new directions or capabilities
- The Plan is a blueprint for the entire Environmental Health Sciences, not for NIEHS alone; must be a partnership



Strategic Goals

1. Identify and understand fundamental shared mechanisms or common biological pathways (e.g., inflammation, epigenetic changes, oxidative stress, mutagenesis) underlying a broad range of complex diseases, in order to enable the development of broadly applicable prevention and intervention strategies.
2. Understand individual susceptibility across the life span to chronic, complex diseases resulting from environmental factors, in basic and population-based studies, to facilitate prevention and decrease public health burden.

Strategic Goals

3. Transform exposure science by enabling consideration of the totality of human exposures and links to biological pathways and create a blueprint for incorporating exposure science into human health studies.
4. Understand how combined environmental exposures affect disease pathogenesis.
5. Identify and respond to emerging environmental threats to human health on both a local and global scale.
6. Establish an environmental health disparities research agenda to understand the disproportionate risks of disease and to define and support public health and prevention solutions in affected populations.

Strategic Goals

7. Use knowledge management techniques to create a collaborative environment for the EHS community to encourage an interdisciplinary approach to investigate, analyze, and disseminate findings.
8. Enhance the teaching of EHS at all levels of education and training (K-professional) to increase scientific literacy and generate awareness of the health consequences of environmental exposures.
9. Inspire a diverse and well-trained cadre of scientists to move our transformative environmental health science forward; train the next generation of EHS leaders from a wider range of scientific disciplines and diverse backgrounds.

Strategic Goals

10. Evaluate the economic impact of policies, practices, and behaviors that reduce exposure to environmental toxicants through prevention of disease and disabilities; invest in research programs to test how prevention improves public health and minimizes economic burden.

11. Promote bidirectional communication and collaboration between researchers and stakeholders (policy makers, clinicians, intervention/prevention practitioners, and the public) in order to advance research translation in the environmental health sciences.

Developing Implementation Strategies

- Implementation strategies will cover "what will we do, when will we do it, how much will it cost"
- NIEHS Divisions are reviewing the goals and developing implementation strategies to advance the goals
- Leadership will ultimately consider all the implementation strategies, identify areas of collaboration, and set Institute priorities
- Implementation strategies will provide a framework for budget allocations by Leadership



Legislative Report



- House Labor HHS allocation is \$6 billion less; House Interior Environment allocation is \$1 billion less
- House Labor HHS Appropriations hearing on NIH
 - Focus on National Center for Advancing Translational Sciences (NCATS)
- Senate Labor HHS hearing on NIH
 - Tom Harkin (D-IA) expressed concerns about cuts to NIH funding
 - Dr. Collins spoke on jobs created through NIH grants; every grant creates 7 jobs (~430,000 total)
 - Other issues raised: Alzheimer's, National Children's Study, obesity, TB, pancreatic cancer treatments, and NIH priority setting
- Oversight of federal funding and conferences
- Prevention, diagnosis, and treatment of pancreatic cancer

Congressional Testimony and Visits

- House Committee on Science, Space & Technology Subcommittee on Investigations and Oversight and House Committee on Small Business Subcommittee on Healthcare and Technology hearing on *NTP Report on Carcinogens*
- Congresswoman Lucille Roybal-Allard's (D-CA) Chief of Staff and Legislative Assistant for Health
- Senate Interior & Environment majority staff



Science Advances

- **Maternal metabolic conditions and risk for autism and other neurodevelopmental disorders.** Krakowiak P, Walker CK, Bremer AA, Baker AS, Ozonoff S, Hansen RL, Hertz-Picciotto I. *Pediatrics*
- **Summer temperature variability and long-term survival among elderly people with chronic disease.** Zanobetti A, O'Neill MS, Gronlund CJ, Schwartz JD. *Proc Natl Acad Sci*
- **Costs of childhood asthma due to traffic-related pollution in two California communities.** Brandt SJ, Perez L, Künzli N, Lurmann F, McConnell R. *Eur Respir J*



Science Advances

- Cnot1, Cnot2, and Cnot3 maintain mouse and human ESC identity and Inhibit extraembryonic differentiation.

Zheng X, Dumitru R, Lackford BL, Freudenberg JM, Singh AP, Archer TK, Jothi R, Hu G. *Stem Cells*

- *In utero* exposure to maternal tobacco smoke and subsequent obesity, hypertension, and gestational diabetes among women in the MoBa cohort.

Cupul-Uicab LA, Skjaerven R, Haug K, Melve KK, Engel SM, Longnecker MP. *Environ Health Perspect*

- Arsenic-transformed malignant prostate epithelia can convert noncontiguous normal stem cells into an oncogenic phenotype.

Xu Y, Tokar EJ, Sun Y, Waalkes MP. *Environ Health Perspect*



NIEHS News and Highlights

Data Sharing and Integration

- *Data Sharing Strategies for Environmental Health Science Research Workshop*
- *Building for Better Decisions: Multi-Scale Integration of Human Health and Environmental Data workshop (EPA)*
- *Engaging the Community for Research Success: What Scientists and IRBs Need to Know Conference*
- Todd Parks: the HHS Health Data Initiative and Health.Data.gov



NIEHS News and Highlights

Public Health Leadership

- IOM Roundtable on “Fracking”
- GuLF Study reaches recruitment milestone: >20,000 enrolled; Surgeon General records recruitment spot
- NIEHS fellows and staff develop “Citizen Schools” curricula
- FDA/IOM Tobacco Regulatory Science Fellowship



 **GuLF** STUDY



NIEHS News and Highlights

Meetings and Events

- Children's Environmental Health and Disease Prevention Research Centers meeting
- Partners for Environmental Public Health Meeting
- NIEHS Environmental Health Sciences Core Centers meeting and Community Forum in Boston
- Centers for Neurodegenerative Diseases meeting



NIEHS News and Highlights

Meetings and Events

- WETP National Trainers' Exchange
- NAS workshop on underlying individual susceptibility
- SRP meeting on social, psychological, and economic impacts of contaminated sites
- DOHAD and NCDs, and PPTOXIII
- Rio+20 Sustainability Indicators



NIEHS News and Highlights

Upcoming Meetings

- Parkinson's Disease Premotor Symptoms Symposium, NIEHS, Research Triangle Park, June 7-8, 2012
- Excess Folic Acid Workshop, cosponsored by NIH Office of Dietary Supplements and NIEHS DNTP, Washington, DC, June 12-13, 2012
- Systems Biology Workshop, NAS Committee on Emerging Science for Environmental Health Decisions, Washington, DC, June 14-15, 2012

NIEHS News and Highlights

Awards and Recognition – Dr. Linda Birnbaum

- The 2012 Health Policy Hero Award from the National Research Center for Women & Families
- The 2012 Science Leadership Hero Award from the Breast Cancer Fund
- Invitation to present the 12th Robert C. Barnard Environmental Lecture by the American Association for the Advancement of Science



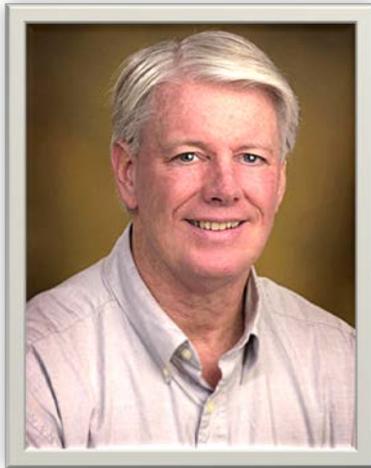
Dr. Linda Birnbaum

NIEHS News and Highlights

Awards and Recognition



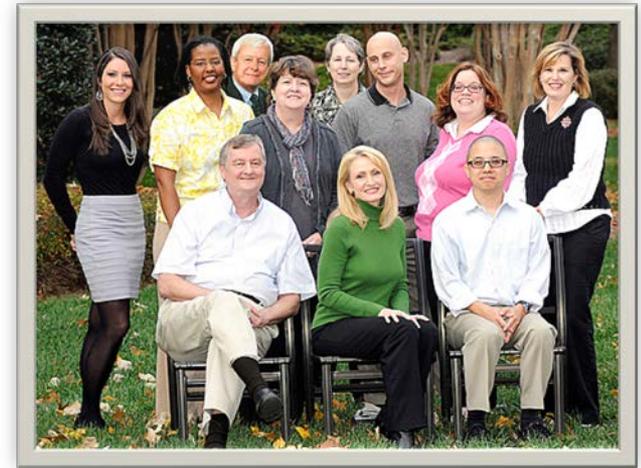
Mr. Liam O'Fallon



Mr. Joseph
"Chip" Hughes



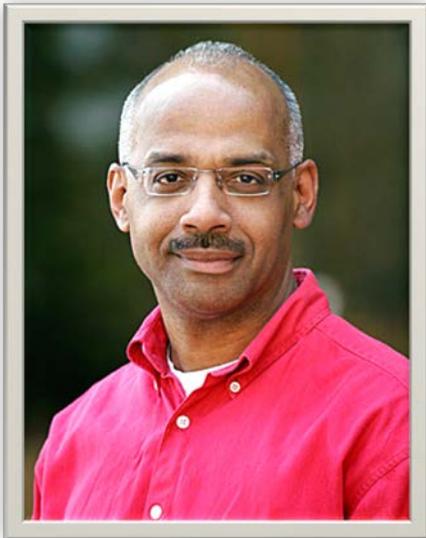
Ms. Sharon Beard



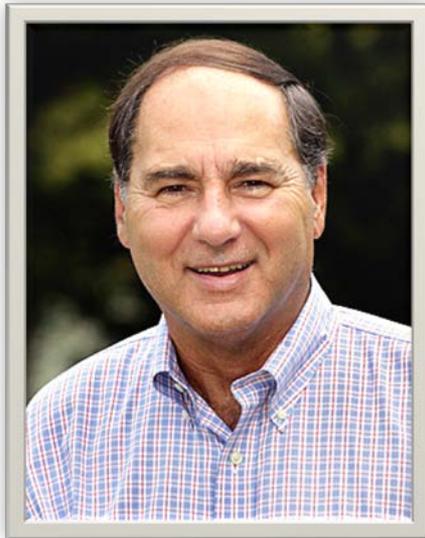
OCPL Group

NIEHS News and Highlights

Awards and Recognition



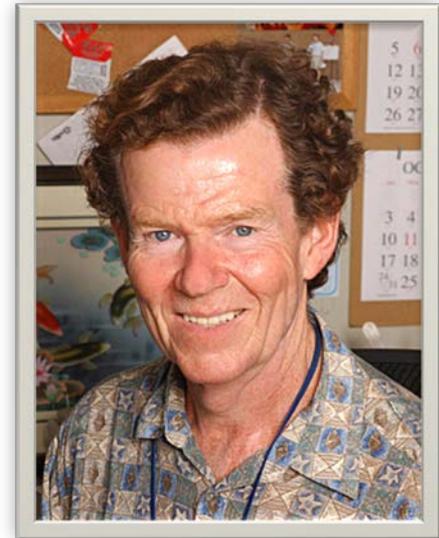
Dr. Robert Sills



Dr. Kenneth Korach



Dr. Dale Sandler



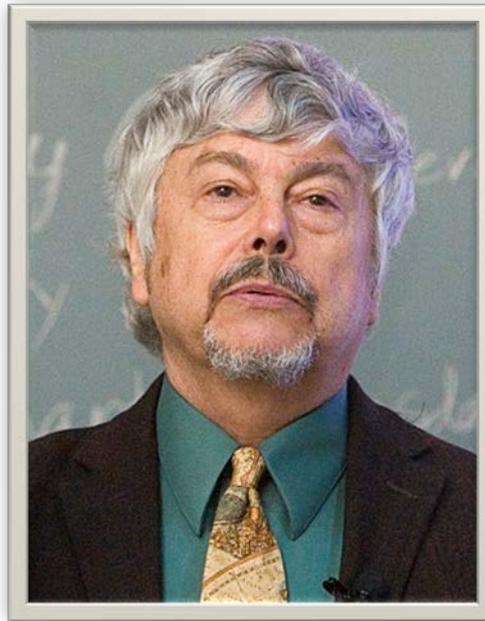
Dr. Walter Rogan

NIEHS News and Highlights

Awards and Recognition



Dr. Karen Adelman



Dr. Kirk Smith



Mr. Chris Long

Thank you!
Questions?

